

California State University, San Bernardino

**CSUSB ScholarWorks**

---

Theses Digitization Project

John M. Pfau Library

---

2007

## The effects of experiential learning: An examination of three styles of experiential education programs and their implications for conventional classrooms

Mary Pizarchik

Follow this and additional works at: <https://scholarworks.lib.csusb.edu/etd-project>



Part of the [Educational Methods Commons](#)

---

### Recommended Citation

Pizarchik, Mary, "The effects of experiential learning: An examination of three styles of experiential education programs and their implications for conventional classrooms" (2007). *Theses Digitization Project*. 3305.

<https://scholarworks.lib.csusb.edu/etd-project/3305>

This Thesis is brought to you for free and open access by the John M. Pfau Library at CSUSB ScholarWorks. It has been accepted for inclusion in Theses Digitization Project by an authorized administrator of CSUSB ScholarWorks. For more information, please contact [scholarworks@csusb.edu](mailto:scholarworks@csusb.edu).

THE EFFECTS OF EXPERIENTIAL LEARNING: AN EXAMINATION  
OF THREE STYLES OF EXPERIENTIAL EDUCATION  
PROGRAMS AND THEIR IMPLICATIONS FOR  
CONVENTIONAL CLASSROOMS

---

A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino

---

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Interdisciplinary Studies:  
Integrative Studies Option

---

by  
Mary Pizarchik

March 2007

THE EFFECTS OF EXPERIENTIAL LEARNING: AN EXAMINATION  
OF THREE STYLES OF EXPERIENTIAL EDUCATION  
PROGRAMS AND THEIR IMPLICATIONS FOR  
CONVENTIONAL CLASSROOMS


---

A Thesis  
Presented to the  
Faculty of  
California State University,  
San Bernardino


---

by  
Mary Pizarchik  
March 2007

Approved by:

  
Dr. Sam Crowell, Chair, Department  
of Language, Literacy, and Culture

3/6/07  
Date

  
Dr. Robert London

## ABSTRACT

Using methodologies of interviews and observation, this study focuses on three distinctive and successful kinds of experiential education: a summer arts program, an outdoor science program and a wilderness education program. The project applies insights from the programs to the central question of this thesis: How can experiential learning be utilized within the traditional classroom given the constraints of the No Child Left Behind Law and standardized teaching? The study examines theories of experiential learning and the benefits of such education.

## ACKNOWLEDGMENTS

A sincere thank you is due Anjee Nero for transcribing the interviews. My heartfelt thanks go to Kristie Nero for her extensive hours of typing and interpreting my handwritten pages. My deep appreciation and eternal love goes out to my brothers and sisters: Theresa, Corinne, Tony, Joseph, Sydney, and Rainer for their playful humor, constant encouragement, solid strength and unconditional love. My appreciation also goes out to Carla Sulli for her deep empathy, warm friendship, and passionate commitment to teaching children. My respect, love and eternal gratitude goes out to Dr. Bill Akpinar and Dr. Glenn Alabastro for their generosity, wisdom and extraordinary healing abilities. They gave me hope and the courage to heal in the face of no possibility. My deepest appreciation goes out to Dr. Sam Crowell and Dr. Robert London for their deep listening, loving hearts, enlightening vision, inspiring passion and spiritual wisdom. They have inspired our cohort to teach beyond the current paradigms of education. Dr. Crowell and Dr. London have reminded me to nurture our students' hearts, minds and spirits such that education becomes transformative.

## DEDICATION

To all teachers and healers transforming  
the world through their passion.

## TABLE OF CONTENTS

ABSTRACT .....	iii
ACKNOWLEDGMENTS .....	iv
CHAPTER ONE: INTRODUCTION .....	1
CHAPTER TWO: REVIEW OF THE LITERATURE .....	15
Art .....	32
Science .....	45
Wilderness Education .....	53
Conclusion .....	60
CHAPTER THREE: METHODOLOGY .....	63
Idyllwild Arts - The Children's Center .....	64
Astrocamp .....	65
Outward Bound Adventures OBA, Inc. ....	66
Interview Questions .....	68
CHAPTER FOUR: FINDINGS AND RESULTS	
Introduction .....	71
Findings and Results .....	75
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS .....	121
APPENDIX A: INTERVIEW QUESTIONS .....	127
APPENDIX B: INTERVIEW LAURINE DIROCCO, DIRECTOR OF THE CHILDREN'S CENTER .....	129
APPENDIX C: INTERVIEW MEGHAN SHEARER, PROGRAM DEVELOPMENT, OBA, INC. ....	140
APPENDIX D: INTERVIEW BRIAN WINDROP, DIRECTOR OF ASTROCAMP .....	165
REFERENCES .....	175

## CHAPTER ONE

### INTRODUCTION

The purpose of this research is to investigate the effects of experiential learning in the nontraditional settings of alternative arts education, outdoor science education and wilderness education. Today in public education there is a focus on standards and there are few opportunities for experiential learning. Yet, when we send students to non-traditional schools or experiential learning environments, we find they love it.

What is it about an experience that has the power to generate passion or spark joy for new learning, new discovery? In my own life, I recall experiences that are powerful reminders of active learning through experience. When I close my eyes I can see pictures, remember sounds, sensations and even smiles. As a child, I remember playing in the hardwood forest behind our house. My dad had put pipes in the ground to connect to an underground spring. The pipes led to an old-fashioned, peg-legged bathtub that he had put near the stream to use as a watering trough for our cows. I spent many hours by that stream exploring mud, clay, rocks and water as well as trying to see who lived there. I learned how to quickly catch salamanders with



handfuls of mud. I was amazed by their different colors - brown, orange, red and black ones with red spots. I still remember examining them closely, careful not to hurt them. What science book could give me the sensation of their, moist, clammy, slippery skin against the palm of my hand? How could I describe the beauty of watching them swim in the bathtub or squiggle like lightning through the mud? This was experiential learning without construct or design; a pure discovery in nature. It became an art and challenge to catch one and then release it back into its natural home. In my own life, when I experience learning, I have found it to be more alive and joyful. The experiences become part of me.

I recall some learning through experiences that did have construct and design. Yet, somewhere in the process there was a freedom that allowed for richer self-discovery.

My mind races back to a ropes course I participated in several years ago. The image is still vivid in my mind as well as the self-knowledge. I had just climbed up a mountain near Santa Rosa, CA. I remember standing on a platform, the size of a diving board, sticking out from the side of the mountain. Blue sky, a crisp cool breeze, and the lush valley below beckoned me to step into the

unknown. I was harnessed, ready and waiting for instructions to ride the zip line. Would I be able to face my fear of heights and zip across the line, flying from a mountain to the valley below into a group of supportive hands?

I remember standing with my fear stuck in my mouth, thinking, "Did my friend really say I had to jump off the edge?" I bent my knees to jump. Suddenly, the instructor's voice pierced through the noisy conversations in my head. "Listen! You need to listen to instructions! Grab on to the handles. Do not let go for any reason. Then step off the platform." I listened to clear, concise instructions and faced my fears. I stepped into space and the fear and shock splintered, transforming into emotions of joy and ecstasy. I felt like I was flying. Many emotions and thoughts coursed through my mind during those moments. I faced a physical challenge and much more. I learned about listening carefully, about being present in the moment and trusting others, just to name a few insights. Some would say I just experienced "experiential learning" in the wilderness. This physical challenge in the outdoors had a specific design to it. Yet it allowed for other unknown growth and self-reflection. Again, this experience became part of my being. It caused me to continue to ponder the

elements that make experiential learning different than traditional education.

My mind goes back to a specific example of experiential learning that took place in our master's cohort. One of our assignments was to construct a sand painting within each of our smaller groups (4-6 people). Mandalas are traditionally used in the Tibetan Buddhist and Native American cultures. A mandala is often created to be used in special healing ceremonies. In general, all mandalas have outer, inner and secret meanings. The creation of a sand painting is said to affect healing in all of these areas. It is used as a metaphor for life. The mandala often represents the reality of the world and its impermanence. It is said that all things that arise eventually disappear. Within that construct, mandalas are created and then destroyed. The mandala is made by using colored sand to create patterns and designs often represented by ancient, spiritual symbols and geometric designs.

Our assignment was to create a sand painting within each small group. This built upon the nature of a mandala as a creative process in which we would be participating in a sacred ceremony/story. Following this, we would disperse the sand on the fire-ravaged mountains behind our

university. The Old Fire had just burned thousands of acres and affected the lives of people in our cohort as well as family, friends, and the larger community. This would be a way to help heal nature and our community. It sounded simple, beautiful and something positive we could do against the backdrop of all the destruction we had experienced as a community. It was a process that we were excited about yet there was sadness and reverence in the silence.

First, we made colored sand in huge buckets. Then we were asked to go in nature or just think about symbols that were meaningful to each one of us. We were to collect symbols that related to our sense of place or home. Then we were to use those symbols to sketch a design for our quadrant of the sand painting. When I thought about symbols, I thought about growing up on a farm in Pennsylvania. I realized how much I missed being outdoors in nature. I decided to use pine trees, mountains, flowers, water, a bear, a coyote and the sunburst and emergence symbols for my design. I am not an artist but I sketched a design using these symbols. Each symbol was personal to me and had a story behind it. For example, I thought of the coyote because one of my Native American friends gave me the gift of a coyote hide to use when

telling stories to my students. I felt it was a great honor. The pine trees reminded me of our family farm and peace. Listening to the wind going through the tree branches made me feel as if the wind was whispering in my ear and I realized how connected I am to the earth.

So, each of us in our group were creating a design to bring to the whole sand painting board. Individually, we worked on our quadrant and then we connected our whole sand painting with an essence. Students were asked to bring some essence from nature to use to connect our quadrants as a group mandala. Two of us crushed acorns and azalea petals on a broken Gabrielino metate. I imagined the spirit of a Tongva woman crushing acorns on her metate hundreds of years ago in southern California. What did her spirit contribute to this mandala? Our other group member brought in pungent herbs that she had grown. In this process so far, we learned what symbols were important to us. Each of us had our personal symbols and yet we were designing a larger sand painting with a communal goal of healing the earth.

As a larger cohort, we began constructing our sand painting on 4' x 4' wooden trays. I watched myself struggle with the proper use of the sand funnels. We worked individually on our quarter of the sand painting.

At first I was focused and lost all sense of time. It was interesting to note the many conversations and revelations about my group and myself as we worked. I realized, at one point that I had not let go of my one-dimensional design in order to go with the flow of what I was creating in the sand. I needed to suspend judgment of myself as an artist and let my creativity evolve. At times, my concentration was disrupted by others talking, laughing, rushing or finishing early. I found I had to include the noise in each group as part of the process. In our own group we had to allow for each other's uniqueness and then we had to discuss what essence to use in order to connect the parts of the mandala. Thus, we were then connecting as a group. These are only a few of the insights I discovered. Each sand painting (there were about 5 or 6) was unique, colorful and beautiful. We marveled at the designs, which were so different in each group. Each mandala was part of the whole of our larger cohort. After we made them, our professors gave us time to share as a group and reflect on the art made as well as the process involved. As each group shared, our appreciation of the art and the process became deeper and richer in meaning.

The final mandala art piece was not all that was learned or experienced. There were many layers of

conversation and insight happening, ranging from the individual to the groups and then to the larger cohort as a whole. We communicated in a form other than words. Vision, creativity, color and emotion were some things that were expressed in the sand. We took our symbols and made a tangible piece of group art. My words do not do justice to the layers of learning that occurred. Still, we were not done with the process in this experiential piece of art.

Our professors had asked us to think and express ourselves in a form other than words. They left us to reflect on questions such as: What was created in the silence? How is meaning made tangible in the world? What if there is no separation between the tangible and intangible? What is a "teacher as an artist?" What is it to allow something to be expressed through you on a societal, political or spiritual level? How is reality manifested in the word? What's the relationship between personal and social responsibility? Needless to say, the answers to these questions involve a rich inquiry process and an ongoing conversation.

We left the sand paintings on display at the library for about a month. At our next class we revisited some of the questions. Then our professors asked us to recognize

that we were involved in a collaborative healing process for the mountain. They asked us to approach the final piece of dismantling the mandalas with a quiet reverence, or a sense of the spirituality (However, we defined that for ourselves).

Each group pushed the sand to the center of their sand painting tray. We swept and put every grain of sand into ceramic pots. We carried them outdoors to spread the sand on the charred mountains. Each person found his own way to ask for healing for our land and community. No one had to speak. Everyone was in his or her own process. For me, I found myself asking for healing for the mountains, plants, and animals. Then I found myself asking for healing for individual family members, myself, friends, our cohort, our group members, our community and our world. It was personal for each person, yet we were asking for healing on many levels. Thus, the mandala process was completed as we destroyed the art and gave the grains of sand to nature in our individual type of prayer or blessing. Traditionally, the creation and destruction of a mandala is said to affect healing on many levels. The earth would carry the blessings and power of the mandalas throughout the world. The beauty is that we will not know



all those levels and yet we sense some of it and allow for the unknown.

For me, the entire artistic process was experiential in nature. Our professors designed a project that had an artistic intent as well as the intent to make a difference in our fire-ravaged community. This experiential art process seemed simple in the beginning. We were immersed in making sand paintings from beginning to the end of the ceremonial process. This process allowed for freedom, creativity, and community to emerge out of the art project. It allowed for reflection on many levels. I would say that it affected us on a personal level as an individual and then as a group. Also, the project impacted our larger cohort and our community. It is difficult to describe the many layers of learning that I went through. I was amazed by the beauty; the depth, the creativity and the healing that expressed itself in our cohort, the community and ultimately in nature. Again the learning I experienced in this process became part of my whole being. As a teacher, I can see the stark difference between this experiential process and teachers in traditional classrooms reading about sand paintings and then having students color pictures of sand paintings.

These memories or learning experiences are imprinted in my mind. Experiential learning can have a powerful effect on the mind, body and spirit. These experiences provide the impetus for my inquiry into experiential learning. This inquiry will engage the following questions. What makes experiential learning effective? What are the implications of experiential education in the classroom? In other words, how might experiential learning benefit the students in traditional classrooms? What might be some obstacles to implementing experiential learning in the classroom? To assist in answering these questions a thorough review of the literature on experiential education was conducted. Also, the directors of three different experiential programs will be interviewed.

A review of the literature will indicate that experiential learning is a rich process for educators to utilize in teaching. According to John Dewey, "every experience influences future actions." The literature clearly indicates that teachers should organize materials and positively direct students' experiences. Traditional educators often start with curriculum guide, which directs the learning environment or lesson. Often in this case, a specific set of information; facts or concepts are imposed on students. Experiential educators differ in the

beginning of the planning process because they consider the needs of the students, as well as the content material before they immerse them in the learning environment. Once involved, the intention is that students construct their own meaning, often in the present moment. Experiential educators also believe that reflection is a necessary part of the learning process. After students complete a lesson or project they are asked to reflect on the events. They then construct new meaning out of the experience. Thus, experiential educators believe that this type of learning involves the whole student, stimulates the desire for learning and gives students the ability to extract new meaning from the experiences.

My review of the literature will describe three types of experiential learning. They are arts education, outdoor science education and wilderness education. The arts are experiential by virtue of their very nature. Music, dance, visual arts and theater are disciplines that involve one's whole body. Many believe that art is another language not driven by merely words or numbers. The review of the literature shows that the arts can impact many areas such as critical thinking, self-esteem, academic achievement, creativity and the joy of learning.

Science education lends itself to experiential learning because it is a traditional discipline that has utilized hands-on-activities, experiments, projects and inquiry based lessons. There have been many models used in education as students explore the "scientific method." The research in the field clearly indicates that these methods have had a positive impact on cognitive learning, problem solving abilities, academic achievement and the acquisition of scientific knowledge.

Wilderness education also lends itself to experiential learning by the very fact that learning occurs outdoors in nature. There are many programs that provide people with opportunities to explore physical fitness challenges, develop knowledge of the outdoors as well as improve self reliance just to mention a few. Again, the review of the literature mentions many positive outcomes that occur outdoors. Researchers report an improvement in problem solving abilities, self-confidence, interpersonal skills, and academic achievement.

The second part of this project is to conduct interviews with the directors of three different experiential programs. These directors include: Laurine DiRocco from the Children's Center, Brian Windrope from Astrocamp and Meghan Shearer of Outward Bound Adventures

(OBA, Inc.). The interview will follow a set format of questions (See appendix A). However, it will allow for other questions/answers that may come up. First, I will explore how each program defines experiential learning. Experiential learning can include many different disciplines and programs. Are there any similar perceptions that emerge out of the three different programs? How do those results compare with what is found in the literature? What are some of those outcomes that are fairly consistent? I will look for patterns that might emerge from the different programs. Next, I will draft a summary of the results from both the literature and the interviews. The results will provide some insight into the implications of implementing experiential education in the traditional classroom setting.

## CHAPTER TWO

### REVIEW OF THE LITERATURE

What are the effects of experiential learning? Before we examine such effects one must have a greater understanding of experiential learning. Simply defined, it is learning by doing. In this definition, there is an assumption that people learn things (positive or negative) through their life's experiences. This paper will briefly examine three disciplines that seem to naturally lend themselves to experiential learning. These disciplines include the creative arts, wilderness education and science programs. In fact, when reviewing experiential learning one finds that is a broad field with its fingers in many pots. What are some of the consistent themes found in experiential education? Does the face of experiential learning change depending on the discipline being explored? Can the elements of an effective experiential learning experience be used to guide teaching regardless of the discipline?

The review of the literature reveals a multitude of definitions for experiential education. However, there is consensus that experiential learning in the twentieth century has its roots in the philosophy of John Dewey.

According to John Dewey, if education is to be progressive it needs to be based on a philosophy of experience (Dewey, 1938). Dewey stated that in order for schools to have a new direction there needed to be a "coherent theory of experience, affording positive direction to selection and organization of appropriate educational methods and materials" (Dewey, 1938, p. 30). Dewey goes on to further clarify his theory of experience with which he believes there is an "experiential continuum" (p. 33). In other words, if we look at experiences from a biological standpoint, "every experience enacted and undergone modifies the one who acts and undergoes, while this modification affects, whether we wish it to or not, the quality of the subsequent experiences" (p. 35). So, every experience influences to some degree, future experiences.

Dewey (1938) often compared experiential learning to "growth" in that it is ongoing and develops physically, intellectually and so on. Given that, Dewey believed the educator should affect the quality of the experience. If it is a quality experience it will "arouse curiosity, strengthen initiative and set up desires and purposes that are sufficiently intense to carry a person over dead places in the future...Every experience is a moving force" (p. 38). Dewey also believed that the educator needed to

direct experiences in order to promote positive learning and future growth. "A primary responsibility of educators is that they be aware of shaping the actual experience by environing conditions, but they also recognize concretely what surroundings are conducive to having experiences that lead to growth." Dewey then goes on to stress another principle of experiential education. He believed there is an "interaction going on between an individual and objects and other persons" (p. 43). In other words, there is interplay between the students, teachers and objects in the educational settings. "The environment, in other words, is whatever conditions interact with personal needs, desires, purposes and capacities to create the experience which is had" (Dewey, 1938, p. 44).

Dewey believed that the principles of continuity and interaction are inseparable. He felt that educators should be concerned with directing and setting up the situations for experiential learning to occur. Dewey also believed that educators needed to be aware of the interaction of the student with the environment. Dewey believed that when traditional educators set up the environment, it was more autocratic and a set curriculum was imposed on students. They did not consider the needs and capacities of the students who were learning and interacting with the



environment. Instead, there was an idea that certain subjects, methods, and facts possessed educational value in and of themselves (Dewey, 1938). Therefore, Dewey's principle of "interaction" required educators to take into consideration the needs and capacities of the students. Dewey often referred back to his principle of continuity and stated that educators needed to take into account the future at every stage of the educational process. Essentially, every experience should prepare the person for later experiences of a deeper more expansive quality. "That is the very meaning of growth, continuity, reconstruction of experience" (Dewey, 1938, p. 47). He goes on to explain that the experience is not just the acquisition of facts or subject matter. It should stimulate a desire for the student to go on learning.

What avail is it to win prescribed amounts of information about geography and history, to win the ability to read and write, if in the process the individual loses his soul, loses his appreciation of the things worth while, of the values to which these things are relative; if he loses his desire to apply what he has learned and above all, loses the ability to extract meaning from his future experiences as they occur? (Dewey, 1938, p. 49)

Dewey felt that educators who focused solely on academic preparation for the future actually robbed students of learning in the present moment. "When preparation is made the controlling end, then the potentialities of the present are sacrificed to a suppositious future" (p. 49). Dewey (1938) argued that educators need to be responsible and give attentive care to conditions which give each present experience a worth while meaning" (p. 49). By doing this, he believed that such present experiences would positively affect the future of our youth.

Dewey (1938) argued that there is an active and passive component in experiential theory. Almost all theorists that follow Dewey agree on these two components. This interaction or push-pull leads to new learning. Dewey (1916) asserted,

To learn from experience is to make a backward and forward connection between what we do to things and what we enjoy or suffer from things in consequence. Under such conditions, doing becomes a trying experiment with the world to find out what it is like; the undergoing becomes instructions - discovery of the connections of things. (p. 40)

His theory argues for integration of what one already knows with doing, to create new knowledge. Dewey saw the human mind as a meaning - making organ, driven to make sense of the world (1938). This idea "predates today's notion of constructivism and active learning" (Teets & Starnes, 1997, p. 32).

Other theorists have attempted to outline steps or processes that one goes through when learning through experience. There are many attempts to define what actually happens in the experiential process. Argyris and Schon (1974) developed a theory of action after working with graduate students doing internships. They believe that the students start with an "espoused theory" (Hutchings, 1988, p. 7). This theory is the information that the graduate students bring into a new situation. Once the student tries out the information or does some action with it, there is an "imbalance" created. The action or "theory in use" actually modifies that original theory (Argyris & Schon, 1974, p. 7). The interaction of the two results in a new theory of action (Hutchings, 1988). Also, they believed that the interaction between espoused theory and the theory in use is on going. This would fit with Dewey's perspective of interaction and continuity.

Gibbons and Hopkins (1980) developed "a scale of experientiality" in an attempt to define the degree of experientiality in various programs or activities. They developed five modes of experiential learning that include: receptive, analytic, productive, developmental, and psychosocial. Then they defined sub-modes within each of these five modes. Each sub-mode represented a continuum of experientiality from least to most experiential. For example, in the receptive mode a learner is passive. They may be watching a film or slides. Experientially, he or she is a spectator with little direct experience other than observing the event. James Neill (2003b) reviews the scale of experientiality proposed by Gibbons and Hopkins. He indicated that it is flawed from the onset since the categories are artificial. Neill feels that all of life is experiential. "Experientiality isn't switched off and on like a light switch" (Neill, 2003b, p. 1). Also, James Neill (2003b) believes that their scale "falls prey to westernized hierarchical thinking in its metaphorical 'ladder' promoting 'active' experiences as inherently more valuable than 'passive' experiences" (p. 1).

Kolb (1984) is another educator/theorist who attempts to organize the process of experiential learning in a graphic model. He suggests that learning occurs in stages

in an on-going cycle of learning that integrates knowing and doing. David A. Kolb (with Roger Fry) is known for creating an experiential learning circle that includes the elements of: concrete experience, observation, reflection, the formation of abstract concepts and testing concepts in new situations. (Kolb, 2003) Kolb and Fry (1975) suggest that a person often starts with a concrete experience or an action. The next step is to observe and reflect on the action that was taken. In the third step, the person would form a new understanding or concepts. This new knowledge would be applied through action in a new situation. Kolb and Fry (1975) argue that the learning cycle can take place at any one of the four points. "Two aspects are seen as noteworthy: the use of concrete, 'here and now' experience to test ideas; and the use of feedback to change practices and theories" (Kolb, 1984, p. 7). The thought is that once something is experienced and reflected upon, a new understanding or knowledge emerges. According to Kolb (1984), "learning is a process whereby knowledge is created through the transformation of experience" (p. 7). This model appears to be linear. However, the authors argue that the process could be seen as a spiral. In general, both the Gibbons and Kolb models reflect a business perspective.

Beard and Wilson defined experiential learning "as the conscious or unconscious internalization of our own or observed interactions, which build upon our past experiences and knowledge" (2002, p. 15). In other words, some kind of learning or knowledge occurs as a result of the experience. It is different than just going through constructed experiences. Some form of reflection takes place. After that reflection, there is new knowledge or a new sense of awareness. This new knowledge gained would fit in with all of the other theories proposed.

Experiential learning has evolved over the past ten years. Different theorists have explored its value in the workplace, outdoors and in adult education. In fact, there are still many differences surrounding the definitions of experiential learning. Some researchers believe that current models of experiential education do not address the whole experience. They believe that models should include the affective and cognitive domains. Many critics as cited by the National Institute of Adult Continuing Learning Education [NIACE] (2003) have argued that experiential learning theories have resulted in a split of the mind and body. In other words, the very idea of designing an experiential learning cycle with linguistic components such as concrete action and reflection cause

such a split. In this view, the rational mind and its concept of experience become more valued than the body. "The body in some respects has been somehow banished from learning along with the body's enmeshments in its social, material and cultural connections. (NIACE, 2003) para.3 As one can see, the field of experiential learning continues to be one that is rich with ideas, theories and debate.

Other recent areas of research support many of the principles of experiential learning. Some of these learning theories include facets of constructivism, multiple intelligences theory and brain - based research to mention a few. Constructivism is a learner-centered educational theory that contends that each student must construct his/her own understanding by tying new information to prior experiences. Historically there has been a distinction between Piagetian Cognitive Constructivism and Vygotsky's Social Constructivism (Jadallah, 2000). Swiss educator, Jean Piaget focused his research on the learner as an individual. Piaget watched the ways children manipulated objects and he found the learner made right or wrong conclusions about those objects (Henson, 2003). It is Piaget's (1926) belief that knowledge was constructed in the mind of the individual.

Thus, cognitive constructivism has been "interpreted to mean that the teacher creates a learning environment of hands on exploration and discovery that allows students to make connections between any new subject matter and their prior knowledge" (Jadallah, 2000, p. 221). The focus is on the individual constructing his own knowledge. As one can see this constructivist view would fit comfortably within the precepts of experiential learning. Students are encouraged to experience and explore open-ended activities in the experiential process that allow them to make new meanings. This "doing" and "thinking" is going on simultaneously. One difference is that the teacher does not seem to guide the process as much as in experiential learning process. Also, there is little mention of the reflective process.

Social constructivism is believed to reflect more of a Vygotskian perspective. Russian psychologist and sociologist named Lev Vygotsky (1896-1934) also studied children's interactions. He found that when students worked in small groups they could solve problems by discussing solutions and collectively helping each other (Henson, 2003). Vygotsky (1978) felt that students could solve problems more efficiently by working together rather than working alone. This social learning approach is



called "negotiating meaning." Students need to talk and listen to each other in social, academic and problem solving contexts. Out of this language come new thoughts, which generate new meaning. Language is the construct that is focused upon in this theory.

From this perspective, the social interaction between the teacher and other students is an important part of the learning process. "Knowledge is not solely constructed within the mind of the individual; rather, interactions within a social context involve learners in sharing, constructing and reconstructing their ideas and beliefs" (Jadallah, 2000, p. 221). Experiential learning theory would support such interaction with all players/objects in the students' environment. Social constructivism seems to provide for more guided teacher involvement that allows students to build knowledge. This kind of interaction provides more opportunities for the development of language skills and understanding the cultural norms in a group. Experiential learning allows for meaningful conversations to occur as well.

Howard Gardner (1983) proposed a new view of intelligence. He believes that all human beings are capable of at least seven different ways of knowing the world. According to Gardner, "we are able to know the

world through language, logical-mathematical analysis, spatial representation, musical thinking, the use of the body to solve problems or make things, an understanding of other individuals and an understanding of ourselves"

(p. 12). Even though they are listed separately, Gardner believes that the intelligences are used concurrently.

People have different areas of strength. If one accepts Gardner's Theory of Multiple Intelligences, there are many implications for educators. Educators should consider the learning style of the students when designing the learning environment. Presentation of material should engage most of the intelligences. If one thinks of experiential learning, more than one learning style is almost always engaged in the process. For example, a dancer in a summer arts program would use musical intelligence to understand the rhythm of the music. His bodily - kinesthetic intelligence would give him the agility to complete the movements. Other intelligence would likely to be engaged as well. Traditional schools place a strong emphasis on the use of verbal and mathematical intelligences.

Experiential learning involves the whole person and by virtue of that type of experience more of the intelligences would be activated. Gardner's Theory of

Multiple Intelligences actually fits well into the frame of experiential learning.

Another theory that would dovetail perfectly with the elements of experiential learning is brain-based research. This research discusses the connection between the brain and education. Caine and Caine (1994) discuss how the brain works and its relationship to education. They feel the brain searches for meaning in experiences. The brain has the "capacity to seek and perceive patterns, create meanings, integrate sensory experience and make connections" (p. 5). It would make sense that when one is in a newly designed experiential environment the individual would try to make sense and learn new things. According to the research, the brain is a "parallel processor" that is capable of making multiple interconnections simultaneously. According to Crowell, Caine, and Caine (1998) there are twelve principles on how the brain actually makes sense of information. One can find a further explanation of these principles in *Making Connections* (Caine & Caine, 1994). Crowell, Caine, and Caine take the research further by developing an instructional model to guide teachers. This model emphasizes "relaxed alertness, orchestrated immersion in complex experiences and active processing" (p. 11).

"Relaxed alertness refers to a state of mind that allows optimal performance and to the creation of an environment that supports this condition" (p. 11). In this situation, teachers can create a learning situation in which the learner is physically relaxed yet ready to be challenged.

The second principle they address is called "orchestrated immersion in complex experiences." The authors (1998) believe that "we learn best when immersed in multilayered experiences that allow us to recognize relevant patterns and see their connections." Such immersion is a way for students to see the connections between the big picture and the small parts. The emphasis should be on a rich complex experience. The teacher's role is to help students "glean information, skills, value lessons and concepts that present themselves as parts of many wholes rather than as separate and isolated attributes..." (p. 12). If one reviews experiential learning experiences, students are often put in the context of a rich learning environment and guided by teachers. I would argue that such a learning environment would be even more powerful if the teacher consciously directed it by using the newer principles that have emerged out of brain based research.

Crowell, Caine, and Caine (1998) go on to discuss a third emphasis called "active processing." This idea refers to the way we learn from our experiences. Active processing provides the opportunity for learners to make meaning out of the orchestrated experience. In other words, what did you learn from this? The authors see this process as both "contemplative and interactive." "It is found in the quality of our questions, the substance of our feedback, and the permission to explore beyond the borders of disciplines and the conventional" (p. 12). This active processing would fit into the experiential model where a student is actively involved in an experience and then reflects on his new learning. Again, brain based research seems to have taken active processing to a deeper level; one filled with many layers of understanding.

Experiential learning gives students a first hand connection with material and how it works in the real world. Teachers plan and direct activities that facilitate the learning - through - doing process. Good teachers know that one should design and organize the learning environment. Excellent teachers take into consideration the needs of the students before planning an event. As one can see from the research, experiential theorists believe that the experiences/background of the students should

drive the teacher's instruction rather than a set of standards required to be taught. Once in the process, teachers as facilitators, must actively react, monitor and adjust the conditions of the learning process as it unfolds rather than controlling it for a specific end result. Students are learning by doing and it involves the whole of their being. In other words, learning is going on physically, cognitively, and emotionally. However, most of the research, does not address the spirit of the learner. The words mind, body and spirit may lie on the pages of a book as a theoretical conversation. But one can argue that the whole of a person is playing in the stream of the experience. It is my assertion that the spirit will not be left behind. Learning unfolds as an organic process, unique to individuals despite the fact that they may all be participating in the same event at the same time. In other words, the experiences are internalized and processed at an individual level. Such experiences will yield different outcomes by mere virtue of the fact that each person brought in his/her own unique background knowledge and experiences. If the learning environment is a rich meaningful experience, students emerge with joy and enthusiasm for learning. The experiential learning process allows for reflection on the new learning. Most theorists

would agree that given meaningful experiences, students will create new knowledge to stimulate future learning connections.

Have you ever seen music fly  
or listened closely to a painting?  
I sang a dance once and  
sculptured a poem  
in blues and deep grays  
as a touch of sandstone lifted  
each word to the stars  
shooting them outward and  
downward encircling planets  
until I caught them  
back again  
in my bare hands.

(Goldberg, 1997, p. 48)

### Art

Art by its very nature is experiential. Most literature on art education does not view the process of art-making in the framework of experiential learning. However, if one looks at the research through the lens of experiential learning one observes the nature of participation and co-creation in the art-making process.

The process involves meditative learning whereby the teacher is facilitator through the process of doing/making art. The student often uses his mind and body when creating. One knows that an artist cannot leave his body behind while making pottery. He absorbs knowledge and is processing it emotionally, cognitively and physically. For the purpose of this literature review, art will be interpreted through the lens of experiential learning. When reviewing the history of art in education, one can see that the face of art education has changed. It has evolved over time just as our philosophical, social, political systems have changed. Therefore, I will include a brief review of the primary paradigm in art education. Initially, the modernist paradigm of the visual arts focused on originality, creativity, pure abstraction, disinterested perception and aesthetic experience (Hutchens & Suggs, 1997). The modernist model of art was based on formalism. Clement Greenberg shaped this theory in the 1940's and 1950's (Hutchens, 1997). In this type of art, students learned art in studio courses and studied traditional foundation courses such as two and three-dimensional designs. "Formalism became the basis of abstraction, the pursuit of form capable of evoking universal aesthetic experience" (Hutchens, 1997, p. 8) In



other words, it was essential for students to understand the design and composition of an art object in order to be able to communicate and talk about universal principles. Art was studied for "art's sake." The focus of class criticism was on how the object was made instead of what the object meant (Hutchens, 1997). Typically, the education of artists, art teachers and subsequently elementary and secondary students had been based on the "formalist" approach.

The formalist approach to art does not allow for an individual's experience or participation. Experience is not perceived as relevant. Instead, formalism comes up with an over-arching view of what is considered right and wrong in art. The art piece has certain qualities/standards that make it "fine art." Formalists emphasize the form, how objects look, what materials are used, and what skills and techniques are used by the artist. This sets it apart from the average person's experience. In fact, historically, formalist art was perceived as something elite or separate from the social, political concerns of the day. Formalism would negate the experience of the participant or viewer. It is more like a separate body of knowledge that is needed to be studied for its "objective" standards of beauty or art. The object

is considered to have value in and of itself rather than the experience. Formalists believe that art should not concern itself with areas outside itself like politics, economics, or community concerns. Experiential learning theorists believe that an individual's knowledge is important and should be considered before planning a learning experience. This knowledge brings a multilayered richness and variability to the experience given all the different backgrounds of the participants. One could argue that you cannot separate the individual and the whole of his background from his interaction with art. Experiential theorists would argue that we bring the whole of our being to art before we even begin the process of making art.

Postmodernism brought forth different perspectives of art. People began to embrace "among other things, art as an expression of culture closely connected to and often critical of common human affairs and social conditions" (Hutchens & Suggs, 1997, p. 5). This relates to the cultural experience and to the integration of this kind of experience in art. Imagine what perspective one might bring to art if one comes from a feminist, ethnic, cultural or socio-political point of view. I imagine that I as a Polish farm girl from Pennsylvania would have a different perspective than that of a Hispanic migrant

worker from Mexico. What perspective might we gain from a feminist, a Native American or a gay man? Their experience in the world itself lends us a different pair of glasses to view art. Learning would take on a different dimension and a different power. Art would definitely take on a new coat of colors if it ventured from the "formalist" approach to include the experiences of these faces in our culture/community. According to Hutchens and Suggs (1997), "a major challenge to modernism in art has been the discourse of feminists, multiculturalists and social revisionists" (p. 5). Postmodern artists are breaking away from "the hegemony of formalism and the centrality of medium, from the aesthetic end of art and from disinterested contemplation of form as the viewer's role" (Hutchens & Suggs, 1997, p. 11). For example, Gablik (1991) believes art should address social and environmental issues. She states, "We need an art [and an art education] that transcends the distanced formality of aesthetics and dares to respond to the cries of the world" (p. 100). Lippard (1990) believes that art should include multiculturalism. Hutchens and Suggs (1997) believe that as a result of this shift in thinking about art, two themes have emerged in art education. These two themes are discipline-based art education and multiculturalism art

education. Feminists were some of the first artists to add to the postmodern view of the visual arts (Hutchens, 1997). They sought to have their art included with men's art. A theme of empowering artistically disenfranchised groups evolved out of postmodern thought. By the 1960's, concerns of underrepresented artists, African Americans, Native Americans, and gays and lesbians were being voiced in the art world. Postmodern art includes "a concern with art that references individual and group experiences of the world, particulturalized by class, race, gender, ethnicity, and sexual orientation" (Hutchens & Suggs, 1997, p. 14). It questions aesthetics as the end of art. Also, postmodern art recognizes "a need for new definitions of quality inclusive of art defined by heterogeneity of multiple voices representing the current situation in the visual arts" (Hutchens & Suggs, 1997, p. 71). However, the question is whether or not such philosophical paradigm shifts about art have occurred in our schools. According to Hutchens and Suggs (1997), such ideas as DBAE (Discipline - Based Art Education) and multicultural reconstruction dominate the art curriculum literature. Yet, the modernist tradition still dominates the art education in schools and teacher education programs. They ask, "Can postmodern thinking be

accommodated in art education and practice?" (p. 14). It is beyond the scope of this paper to answer that question. Instead, this review of the literature will attempt to ascertain some of the positive aspects of art education within the realm of experiential learning.

[The artist] appeals to that part of our being which is not dependent on wisdom; to that in us which is a gift and not an acquisition...[the artist] speaks to our capacity for delight and wonder, to the sense of mystery surrounding our lives; to our sense of pity, and beauty, and pain; to the latent feelings of fellowship with all creation - to the subtle but invincible conviction of solidarity that knits together loneliness of innumerable hearts. (Conrad as cited in Green, 2001, p. 58).

The arts have given mankind different disciplines for reflecting on, expressing and documenting life's experiences. The arts involve the mind, body and heart. At the same time, they are a vehicle from which one can document cultures and history. According to Lewitzky (1989),

Art can, in the hands of great talent, make beauty which reverberates through our lives and carries us into rarified strata. It can shatter our perceptions.

It can clarify our anger. It can help us understand our sorrow. The arts are a mirror for society -- critic, teacher and forecaster - and teach the value of individual differences. (p. 2)

Clearly this approach to aesthetics emerges from an individual or group's experience in the world.

When reviewing the arts in education there are differences in definition of artistic fields. For the purposes of this paper the creative arts will include music, dance, visual arts and theatre. I will briefly look at some of the positive affects of these disciplines on education. Researchers claim that the arts positively impacts critical thinking skills, creative behavior, self-esteem, and academic achievement. This approach suggests that experience is a major factor in substantial kinds of learning.

Recently the research has focused on integrating the arts in the classroom curriculum in order to improve achievement in other academic areas. For example, one school in Ohio is utilizing a smART team in order to teach reading and writing through the arts. This smArt team is made up of five classroom teachers (grades one through five) and four specialists (art, media, physical education and music) (Glass, 2003, p. 10). Students actually visit

Cleveland's Playhouse, Square Center and the Cleveland Museum of Art and the Cleveland Orchestra. These trips become "prompts" for teaching reading and writing. Teachers use poetry, music, sculpture, dance and theatre to teach reading and writing. The research indicates that the smART Team students scored significantly higher on the October 2001 reading proficiency test (Glass, 2003).

Glass (2003) also reviewed another program in the Cleveland area (2003). The Newton Baker School received a grant from the Annenberg Foundation's Transforming Education through the Art's Challenge (TETAC) to transform regular curricula into discipline based arts education. Teachers received professional development services, technical support and the expertise from art mentors to help them develop curricula using a multidisciplinary approach. The regular teacher collaborated with the art teacher to link art objectives with other courses. For example, "for language arts, students might not use their theme books -- they might use the biography of an artist" (Glass, 2003, p. 11). Sheri Pittard, a teacher and a visual artist, who helped write the grant said, "We're seeing higher test scores. We've noticed our students have higher level thinking skills; they are prepared for more than the test; they're able to think on their own"

(p. 11). In these examples, thinking and doing go together. They support the overall goals of education. Glass then goes on to review the Arts Access Partnership Project. It is an arts awareness program at Manhattan's Martin Luther King Jr. High School. The program includes courses led by artists from such institutions as the New York Opera, the Guggenheim Museum, and Destine Dance Company. Students get to experience the arts by attending art exhibits, opera and dance performances. The director of King High School Arts Access Project, Neil Goldberg said, "I've seen arts education turn on and energize students who otherwise might be disenchanted with school" (Glass, 2003, p. 18). Although this research is anecdotal, it seems to indicate that the arts promote higher student achievement as well as an increased motivation to learn. What is the genesis of this increased motivation? This visual, concrete, experiential context clearly aids in the cognitive process across the disciplines.

Edith Norris (1997), Carla Reichard and Konida Moktari examined the influence of drawing on third grade student's writing skills. This study looked at the writing products of 60 third grade students who drew before writing a story. The control group of students wrote without drawing. The authors analyzed the writing of 119



students from three midwestern elementary schools. Students who drew a picture before writing "tended to produce more words, more sentences, and more idea units and their overall writing performance was higher than the students who wrote without drawing" (Norris, 1997, p. 1). These results were consistent for both boys and girls. Researchers also found that student who drew seemed more enthusiastic about writing.

Another researcher, Laurene Ring (2000) developed a unit on art appreciation and persuasive writing for fourth grade students in Huntsville, Alabama. Students were involved in art criticism, personal art production and writing. Students would look at artwork for five minutes and respond to questions. This process allowed students to engage in higher-level thinking that resulted in multiple meanings. Also, Ring's research indicated that students developed interpretive and analytical skills. Artwork was selected for complexity, historical context, subject matter and relevance. This ties in with one of the arguments for national standards for the visual arts. According to Van Tassel-Baska (1998), the standards include an understanding of art in "relation to history" and students "reflecting upon and assessing the

characteristics and merit of their work and the work of others" (p. 466).

Ring (2000) also found that student responses to a work of art were varied due to "each child's ability, creativity, experience, effort and personal relationship to the painting" (p. 5). She indicated that a personal student art activity should accompany an art appreciation lesson. This would tie in with the experiential notion of constructing one's own meaning through the very process of making art itself. Ring also believes that there should be concurrent instruction in the elements of art and the principles of design. These are the skills or the tools of the visual arts, which allow students to become more informed when analyzing artwork. Further, Ring believes that students should understand that art criticism is an organic process. According to Stout as cited by Ring, the organic model provides no set, correct answers. Students reflect on artwork and write their responses. This element fits in with the reflective stage of experiential learning. "Just as the artist clarifies and crystallizes the experience through expression, the student can imitate and recreate that communication through a very personal dialogue and understanding of artwork" (Ring, 2000, p. 11).

From this discussion on art, we find that there are several aspects in common with the literature on experiential learning. First, students are actively learning with their whole body through the specific art discipline. Students have a first-hand connection with music, dance, visual arts or theatre. The teachers take into consideration the needs of the students as well as the specific elements to be taught. They facilitate and adjust the learning process as it evolves. Often, art teachers encourage freedom of expression, creativity and the "surprise" element to emerge from the artistic process. Learning through the arts is a multilayered, symbolic, and organic process whereby students discover and create knowledge about themselves. Students emerge from the artistic realms with a sense of joy and enthusiasm for learning.

#### Earth

If this little world tonight  
Suddenly should fall through space  
In a hissing, headlong flight,  
Shrivelling from off its face,  
As it falls into the sun,  
In an instant every trace  
Of the little crawling things-

Ants, philosophers, and lice,  
Cattle, cockroaches, and kings,  
Beggars, millionaires, and mice,  
Men and maggots all as one  
As it falls into the sun...  
Who can say but at the same  
Instant from some planet far  
A child may watch us and exclaim:  
"See the pretty shooting star!"  
(Herford, as cited in Dunning, Lueders, & Smith,  
1967)

### Science

Science is a discipline that been known for experiments, problem solving and hands on activities. Historically, it has called for explorations that engage learners in thoughtful investigations that promote hypothesizing and questioning, as well as fostering a genuine curiosity about the subject (Kelly, 2000). Learners build, modify, and expand their own understanding of science. Again, most of the research does not view the acquisition of science knowledge through the experiential learning model. If one looks at science learning through the lens of experiential education, one again finds the

elements of active learning, guided instruction and reflection. The following pedagogical strategies are usually evident in authentic science instruction. They include hands-on activity, open-ended inquiry, observation, discussion, group work, and problem solving activities. In experiential learning the student constructs knowledge while he is involved in doing some kind of activity. Science embodies the use of concrete objects and students use their manipulations to form new ideas. As in experiential learning, the teacher's role is one of a facilitator. According to Anderson and Smith (1987), "students generally use their own misconceptions as a basis for interpretation of the explorations" (p. 86). In other words, students often come to the science field with prior misconceptions. The role of the teacher is to determine student understanding and then use that information to help them reconstruct existing concepts. This teacher role is similar to the teacher's role in experiential learning. Both science educators and experiential educators construct meaningful learning environments. The science educator constructs environments directly related to the discipline strands that need to be taught like physical science and life science.

When reviewing science literature one finds that activity based science programs have positive effects on cognitive learning. Bredderman (1983) looked at fifty-seven-controlled studies of three well-known activities based elementary science programs. He found an average of 14% improvement for all measures of student achievement. According to Bredderman, the evidence "suggests that the more activity process-based approaches to teaching science result in gains over traditional methods in a wide range of outcomes (e.g., science process, creativity, language, perceptions) at all grade levels" (p. 513).

Researchers, Arthur J. Reynolds (1991) attempted to extend this research by evaluating the effects of curriculum, science content, knowledge, and science process skills. His study looked at the effects of an experiment-based physical science programs on 556 urban students in grades four through eight (1991). Physical science topics included length, area, volume, mass, velocity, acceleration and force. Conducting experiments in these areas would definitely fit with the experiential learning model. Students approach experiments with one set of knowledge and then use concrete materials to explore and come to new scientific understandings.

Process skills to be used in the experiments included observation, hypothesis testing, prediction, and inference. The content skills used in the experiments included measurement, graphing, arithmetic and proportions. "Results indicated that the number of experiments completed had a significant influence on science process skills but not science content" (Reynolds, 1991, p. 296). The program of experiments in the classroom was not conducted consistently by teachers. Reynolds (1991) felt that the program would be more successful if it was implemented throughout the school year. Overall, the results are consistent with the theory that students can learn much about science through the hands-on laboratory approach.

There are many models for hands-on learning in the science field. However, as I mentioned earlier, few approach it from an experiential model. Kristin Powell and Marcella Wells (2002) did take that approach in their article, The Effectiveness of Three Experiential Teaching Approaches on Student Science Learning in Fifth Grade Public School Classrooms. The researchers looked at three different science lessons to see if they met the Colorado content science standards. They used Kolb's (1984) experiential learning model as a framework to help them

understand the process students engage in. Powell and Wells (2002) agree that researchers have paid little attention to understanding the effects of experiential learning in the public school system. Their goal was to better understand the process of classroom learning from experiential lessons.

First, Powell and Wells (2002) choose a Water Tolerance lesson from the required fifth grade FOSS (Full Option Science System) curriculum. Students grew plant seeds in five controlled environments in order to determine optimum conditions for growth related to water needs. Next, the researchers chose a Project WILD (Wildlife Investigations through Learning Designs) Forest in a jar lesson. Students created four environments and controlled the water in each. Then they made observations about how the amount of water affected the growth of birdseed and aquatic plants. This lesson did not include the four learning cycle stages (concrete experience, observation and reflection, formation of abstract concepts and testing in new situations) as in David Kolb's model. So the researchers developed a third model modifying the original project WILD lesson to include Kolb's experiential learning cycle. Interestingly enough, the results showed no significant difference between the three



treatments. This indicated that the lesson adapted to meet Kolb's experiential model may not lead to a more effective means of knowledge. However, student test scores improved by 24% after participating in the experiential science lessons. "Experientially based programs that directly engage the student in the learning process seem to promote learning" (Powell & Wells, 2002, p. 37). This clearly supports the notion of active learning in experiential theory. Their research also suggests that more than one science curriculum may be helpful in meeting state standards. This research gives evidence of the value of incorporating experiential learning techniques in the classroom.

For many years science educators have advocated the use of outdoor areas for science instruction. Cronin-Jones "compared the impacts of traditional classroom and outdoor schoolyard instruction on the environmental science content knowledge of third and fourth grade students" (2000, p. 1). The study consisted of 285 students from twelve different classes. These students were divided randomly into groups. The control group received no instruction. The second group received traditional classroom instruction. It consisted of a 10-day unit on plant and animal ecology from the county adopted science

textbook series. The experimental group received outdoor schoolyard instruction. They participated in a 10-day unit containing 10 lessons from the Florida Game and Fresh Water Fish Commission's Schoolyard Wildlife Activity Guide (Cronin-Jones, 2000). These lessons covered the same content covered in the textbook. However, the instructional techniques used outdoors included guided reading, lecture, demonstrations, discussions, role-play activities, outdoor lab activities and field observations. Using these different modalities ties in with Gardner's multiple intelligences. They also tie in with the concept of embodied learning in the experiential field. Physical, social, and cognitive skills are activated in the learning.

The topics covered included animal endangerment, predator - prey relationships, microhabitats, plants and animal communities, plant and animal adaptations for survival, habitats, animal homes and animal defenses. The results of the study indicated "that elementary student's learn significantly more about ecological science topics through outdoor experiences than through traditional classroom experiences" (Cronin-Jones, 2000, p. 206). Her research also indicated that the environmental attitudes of elementary students could be changed to be more

positive with as little as ten hours of instruction. Hands-on activities that allow student's direct experience with living organism exert a strong influence on knowledge. This is evidence that schoolyards or natural environments can function as powerful, effective educational tools. This too demonstrates the dimension of experiential learning, which gives one first hand connection with class material and how it works in the real world.

Science has many elements that can be directly related to the experiential learning process. Traditionally, science education has involved students in hands on learning through experiments, projects and open-ended inquiries. This fits in with the active learning element of experiential learning. Science teachers have long facilitated questioning, hypothesizing, and problem solving through the scientific processes. This too fits in with the teacher as facilitator in the experiential learning model. Finally, students build on prior concepts and negotiate new meaning as a result of the hands on processes. As in experiential learning, the direct experience has a strong influence on the acquisition of new knowledge.

To look at any thing,  
If you would know that thing,  
You must look at it long:  
To look at this green and say  
'I have seen spring in these  
Woods,' will not do - you must  
Be the thing you see:  
You must be the dark snakes of  
Stems and ferny plumes of leaves,  
You must enter in  
To the small silences between  
The leaves,  
You must take your time  
And touch the very peace  
They issue from.  
(Moffitt, as cited in Dunning, Lueders, & Smith,  
1967)

#### Wilderness Education

Wilderness or adventure education in its modern form is well over fifty years old (Neill, 2003a). Adventure education is a form of experiential learning that takes place outdoors, often in wilderness areas. The goal is to provide people with opportunities for "developing physical

fitness and knowledge of the outdoors, as well as self-confidence and self-sufficiency" (Meier, 2003, p. 2). These activities include a certain amount of stress or risk, such as rock climbing, ropes courses, and other carefully planned activities

A review of the research indicates that there are more than 700 wilderness programs (Frieese, Hendee, & Kinziger, 1998). They include programs designed for therapy, rehabilitation, education, leadership, growth or organizational development. The programs have been categorized into adventure therapy programs, personal growth programs, college adventure programs, recreation programs and camping programs (1998). This paper is not meant to be a comprehensive review of all of those programs. Instead it will touch upon a few of the positive outcomes that seem to consistently show up in the research.

One of the best-known organizations practicing adventure education is Outward Bound (Berman & Davis-Berman, 2000). The founder, Kurt Hahn, developed a curriculum that emphasized the "four pillars" of physical fitness, self-discipline, craftsmanship, and service (Hahn, 1960). His early intentions were to teach students self-discipline; compassion and initiative through

adventure and service (James, 1990; Miner & Bold, 1981) as cited by Sibthorp. There have been many positive results ascribed to the Outward Bound Program. Meier (2003) indicates that Outward Bound has positive impacts in the areas of "developing physical fitness, knowledge of the outdoors, as well as developing self-confidence and self-sufficiency" (p. 24). Currently there are over 50 Outward Bound schools around the world. Walsh and Golins (1976) developed a model to illustrate how students learn through the Outward Bound process. This model is often used as basis for understanding wilderness education. According to Walsh and Golins (1976),

the learner is placed into [a] unique physical environment and into [a] unique social environment, then they are given a characteristic set of problem solving tasks, [creating] a state of adaptive dissonance to which [the learner] adapts by mastery, which reorganizes the meaning and direction of the learner's experience. (p. 16)

Some course activities are as follows: backpacking / mountaineering, the solo, rock climbing, having leadership responsibilities, camp set-up and cooking, service projects, group discussions and final expeditions (Walsh & Golins, 1976). A meta-analysis of adventure programs was

conducted by Hattie, Marsh, Neill, and Richards (1997). They found that adventure programs positively affected self-esteem, leadership, academics, personality, and interpersonal relationships. A positive change in self-esteem seemed to be the most significant outcome (Hattie, Marsh, Neill, & Richards, 1997). In contrast, McKenzie (2003) believes that "many theorized aspects of students' experiences on Outward Bound courses have not yet been explored through empirical research, while others may remain unidentified as a result of the lack of inductive qualitative research on this topic" (p. 10).

As a result of this belief, McKenzie (2003) an instructor at Outward Bound, explored the ways students learn through the Outward Bound process. Data was collected from ninety students through the use of questionnaires, interviews and observations. According to her research, twenty nine factors "were found to influence course outcomes, including various aspects of course activities, the physical environment, instructors and the group" (p. 80). McKenzie found that challenge activities, mastery of new skills and achieving success were connected to positive outcomes. McKenzie also found that other activities such as the solo, leadership responsibilities, camp set up, cooking and group discussions could be linked

to positive results. In particular, the solo was important to students since they had time for reflection. This immersion in physical activities or challenges fits in with the active learning espoused in the experiential learning models. Reflection is also an important element in the experiential learning process as it allows for time to make connections with new knowledge. McKenzie's study also indicates that the physical environment positively impacts students' self-awareness, self-concept as well as promote feelings of peacefulness and invigoration.

Researchers Glass and Bensoff (2002) reported that challenge course experiences have a positive effect on group relationships. They "examined the effects of a one-day, low-element challenge course experience on the perception of group cohesion among participants" (p. 269). Adolescents work together in small groups (11-15 people) in order to complete challenge activities such as moon ball, spider's web, king's ring, mine field or swinging log. Afterwards, group leaders took time to help the adolescents process what had taken place in order for them to work cohesively as a group. This study found that challenge course activities encourage student interaction and self disclosure. This social interaction and discourse fits in Vygotsky's beliefs that students can solve



problems collectively by working in small groups. The group leader acted as facilitator. Again, experiential learning theories encourage leaders to facilitate the learning process. In comparison, McKenzie (2003) also found that participating in group challenge activities can "increase students' self-awareness, self-confidence, motivation, interpersonal skills, concern for others and concern for the environment" (p. 18). Thus, wilderness programs impact self-awareness, group interactions and the ability to overcome physical challenges.

McAvoy and Lais (2003) studied adventure programs that included persons with disabilities. They found Wilderness Inquiry to be a program "dedicated to bringing together people of all ages, background, and abilities - including people with disabilities and chronic illness - through integrated wilderness learning experiences" (Lais, 2003, p. 6). This program offers wilderness opportunities that include both people with and without disabilities. The research shows that people with and without disabilities seek the same kind of challenge and adventure in the wilderness (Anderson, Lais, McAvoy, Schlenen, & Seligman 1989). The setting in the wilderness itself offers benefits. According to McKenzie (2003), "the course component of the wilderness setting resulted in students

feeling more alive and peaceful" (p. 14). "For example, students' comments included, 'The mountains and forests were so invigorating.' 'I feel real in the outdoors'" (McKenzie, 2003, p. 14). One participant said his participation in the Wilderness Inquiry helped get him through rehabilitation and the major changes in his life after he sustained a spinal injury and became paralyzed from the mid-abdomen down (McAvoy & Lais, 2003). According to Passo, as cited in McAvoy and Lais "Wilderness is a great equalizer; it takes everyone down a notch because everyone is learning their comfort zone. That leaves everyone on an integrated wilderness trip at about the same level. It lets everyone see people for who they really are rather than for how they get around" (2003, p. 27).

This research again demonstrates similar positive outcomes for persons with disabilities as compared to other wilderness programs. Researchers, as cited by McAvoy and Lais found "these programs enhance their self concept, self esteem, and personal growth; increase their outdoors recreation skills and social adjustment; and demonstrates positive behavior changes" (p. 26). The Wilderness Inquiry Programs promote healthy lifestyles, motivate individuals, integrate people into the community and develop

stewardship for the environment (McAvoy & Lais, 2003). As one can see, such wilderness programs can profoundly affect the lives of participants, both those with and without disabilities.

The impact that the wilderness can have on one's experience and learning is clear from the research. What better stage for experiential learning than that of awe-inspiring beauty? The effects of wilderness programs include increased leadership skills, physical skills, interpersonal skills and positive self-esteem. These are just a few of the positive outcomes that have been documented. The hope and intent is that such outcomes will carry over to other areas in people's lives. The challenge for future wilderness programs is to embrace a deeper vision for compassion, service learning and stewardship for the environment. Our greatest challenge as a society is to protect and nurture the wilderness such that it continues to be an enduring resource.

### Conclusion

Now, that we have looked at creative arts, science programs and wilderness education through the lens of experiential learning, what do they have in common? What are the common elements? 1) First, learning embodies the

whole person. Cognitive, physical and social knowledge is integrated in the experience. All of these disciplines include the component of active participation in real life activities. This is one of the hallmarks of experiential learning. 2) The environments are richly structured yet allow for open-ended inquiry, exploration and creativity. The differences in learning environments may result from the specific elements that need to be taught in each discipline. For example, a visual artist would need the principles of mixing colors before making a painting, while a scientist may need to know about electricity before constructing a circuit. Yet, both still involve real life, experiential learning. 3) The teacher acts as a facilitator and guides the learning process. Teachers need to be fully present and adapt as the learning evolves in the process. This takes different skills than a traditional teacher who lectures. 4) Teachers look at the needs of their students before orchestrating learning environments. Experiential education places great importance on this element. These disciplines appear to take the students background knowledge into consideration before designing learning environments. However, the consistency and strength of this characteristic needs to be further researched. 5) Experiential educators propose

that students reflect on the learning. Out of the reflection they create new knowledge from which to hook future knowledge. There is some evidence of this across the disciplines. However, it does not often seem to be consistently focused upon.

The newer theories of constructivism, multiple intelligences and brain-based learning naturally lend themselves to the experiential learning process. One can see that they provide rich layers to be explored in the future. How might the face of experiential learning change if such knowledge were imbedded in the process?

## CHAPTER THREE

### METHODOLOGY

The primary methodologies of this thesis involve both a review of the relevant literature on experiential learning and subsequent interviews of three experiential programs. The programs represent emphases of arts education, science education and wilderness education. These diverse programs were selected in order to study the common components of experiential education as well as the unique focus of each program.

I used a tape recorder to record the interview process. Afterwards, I transcribed the interviews (see appendices). I summarized the main points of each interview and examined what similarities, if any emerged out of the programs. I used content analysis to compare the interviews with the theoretical and research findings of the literature review.

The methodology used in this thesis is both analytical and inductive. Due to the limited nature of the interviews this information is not meant to be generalized to the whole field of experiential education. Instead, it is designed to allow for greater depth and understanding of the questions that comprise the purpose of this

project. Out of this understanding, new questions for further research may emerge.

#### Idyllwild Arts - The Children's Center

I interviewed Laurine DiRocco, the Director of the Children's Center and the Junior Artist's Center at Idyllwild, P.O. Box 38, Idyllwild, CA 92549-0038. Idyllwild Arts is located on the western slopes of the San Jacinto Mountains in Southern California. The 205-acre campus is in a beautiful setting with clean air, alpine forests, mountain meadows and Strawberry Creek. It is a 2-1/2 hour drive from Los Angeles. The Summer Arts program began in 1950 and it has workshops for adults, youth and children. The Children's Center provides opportunities for students 5-12 years of age to enroll in creative writing, dance, music, theatre and visual arts. The Junior Artist's Center is designed for students 11-13 years of age. Professional artists/educators use age appropriate methods to convey the excitement and discipline necessary for accomplishment in the arts. Students are given technical instruction as well as encouragement to come up with creative solutions to artistic challenges. There is an emphasis on small class size (1 to 9) in order to ensure that students receive individual instruction. One goal of

the Children's Center is for students to gain enthusiasm for the arts as well as a basic foundation of technical knowledge. Classes run from 9 a.m. to 3:30 p.m. Monday through Friday.

### Astrocamp

I interviewed Brian Windrope, the Director of Astrocamp, P.O. Box 3399, 26800 Saunders Meadow Road, Idyllwild, CA 92549. Astrocamp is one of the experiential science programs under the umbrella of Guided Discoveries. Guided Discoveries is an educational nonprofit organization, which was founded by Kristi and Ross Turner in 1978. The program teaches science through hands-on methods in nature's classroom. Students attend a three-day, five day or weekend program at either the Catalina Island Marine Institute on Santa Catalina Island, CIMI Expeditions aboard the tall ship, TOLE MOUR out of Long Beach, California or Astrocamp in the San Jacinto Mountains near the town of Idyllwild, California. Astrocamp makes learning fun through hands-on discovery based science taught in a beautiful mountain setting. Astrocamp has earned the distinction of being one of the best camps to enhance student understanding of astronomy and the physical sciences. Since 1990, Astrocamp has



offered an exciting atmosphere of specialized science labs and adventure activities to students in grades four through twelve. Students are able to see and study planets, distant stars, star clusters, nebulae and galaxies using a variety of instruments at night. During the day, students participate in a broad range of classes including: Solar astronomy, electricity and magnetism, rocket building and launching and lights and lasers. Astrocamp has a large indoor swimming pool for microgravity classes, a ropes course, a climbing wall and scenic hiking trails.

#### Outward Bound Adventures OBA, Inc.

I interviewed Meghan Shearer who is in charge of Program Development at OBA, Inc. 2020 Lincoln Ave., Pasadena, CA 91103. Outward Bound Adventures (OBA) is a program that provides outdoor environmental learning experiences to urban youth in the Los Angeles area. It will work with all youth but primarily focuses on inner city youth and youth that are at risk of becoming involved in anti-social activities. OBA, Inc. has its roots in an earlier organization called the Junior Audubon Society. Helen Mary Williams, a teacher at Cleveland Elementary School in Pasadena, started the Junior Audubon Society in

1960. She had seen a need for taking urban youth on hikes into the wilderness to learn about subjects such as science. OBA takes students on trips to mountain environments, coastal tide pools, deserts and other outdoor locations to educate them about the natural environment, outdoor careers and to challenge them to learn more about themselves. During the trips, the youth learn basic resource management, conservation and ecological concepts. They also gain a new appreciation for nature and themselves. OBA trips promote group involvement, personal challenge, and peaceful behaviors to solve peer problems, team building and leadership skills. OBA has specialized day and weekend trips to local state parks, lakes, national forests, rivers, tide pools, and deserts. It is known for its summer program where youth students are led on a rigorous seven to ten day backpacking expedition in the High Sierra Wilderness. Funding for trips come from grants, donations, or direct buy. Participants in the at-risk youth program are asked to contribute something, even if it is only five dollars so they may claim ownership in the program.

Each director was asked the following questions. (Also, see Appendix A) The interview instrument was designed with the support of my academic advisor. The

interview was designed to probe the experiential nature of each school.

### Interview Questions

1. How do you define experiential learning in your program?
2. How would you describe the emphasis in your program?  
*(For example, is the focus on wilderness, arts, or science? Is the focus project based or emotional / psychologically based?)*
3. What population of students and age groups does your program serve?
4. Can you give me a brief description of how "experience" is integrated into your program? *(For example, are the activities guided? Are students given choice? Are the activities preset or do they evolve?)*
5. Are these experiences based on some larger, more comprehensive curriculum or is the curriculum based on the experiences themselves? Please explain and give some examples.
6. Please describe a typical day? What happens?
7. What theoretical models inform what you do in your planning or in your curriculum development?

8. Have you worked in non-experiential settings? What kinds?
9. How would you describe the difference between experiential learning and the more traditional forms of learning? *(For example, are there difference outcomes, processes, methodologies and/or skills?)*  
Please explain and give some examples.
10. What do you consider to be the advantages of experiential learning in general and your experiential focus in particular?
11. In what ways do you think this form of learning could be incorporated into traditional settings?
12. How would you describe the effects of experiential learning on the students you serve?
13. Do these effects occur in stage-like transitions or are they more unpredictable?
14. Do you receive feedback from teachers, parents, students, etc?
15. Does experiential learning work? How do you know?
16. What tools do you use to evaluate or measure the results of experiential learning?
17. I am really interested in the transformative shifts that may occur. From your experience, are there

examples of this that come to mind? Are there factors that seem to be especially important?

18. Finally, if schools were to be more experiential, what kind of training would teachers need?
19. Where would this training most effectively be obtained? (*For example, universities, workshops, etc.?*)
20. Is there anything else you would like me to know?

## CHAPTER FOUR

### FINDINGS AND RESULTS

#### Introduction

Imagine you are walking through the woods and you come upon this scene. Two tall pine trees guard each side of a natural earthen stage. There are children couples in strange costumes dancing. Angels flit in and out of the pine trees. One angel says, "I have a woman to your lord." A language spoken but not of this era. "I don't know what that means," says a child actor. The director responds, "It's like you have a woman for the husband. You need to know the meaning behind the words." The wind is swaying through the sunlit branches while birds chirp in the background. I'm intrigued as I watch these young teenagers do a dress rehearsal for Shakespeare's play "As You Like It." Come with me. Let's walk further among the tall pine trees.

I am drawn to an area topped with a green parachute roof. It's floating above Studio D. Studio D is a building to the right of a natural work area again set among pine trees. The green parachute roof is like a protective shawl, fluid and softly covering Studio D. Yet, it allows streams of light in while floating in the breeze. The

easels and tables below it are worn, splintered and lovingly paint splattered. I'm drawn in by the children's voices. They are immersed in painting and experimenting with different mediums and art projects. The two teachers are off to the side acting as advisors. I asked one young artist why he drew a caricature of President George Bush. He tells me, "It's like a character biography. If you turn it around, it shows the character from different sides. Caricatures show emotions more than pictures. I'm passionate about it. It's fun. Not everyone can do it. I do it in different subjects." I'm impressed. I want to stay and ask questions as a way to explore the creative process in these young minds. You have just experienced two snapshot moments in the Children's Summer Art Program.

Now, let's drive over to Astrocamp, another site on top of the San Jacinto Mountains. Again, the backdrop is Mother Nature. Pepsi bottles with fins and clay have been turned into student-designed rockets. Students are launching them outdoors off of a water-propelled launch pad. Some students are counting down. Others are measuring the distance traveled by each rocket. Who would you bet on for going the farthest? Foxy, Ziggy, or Icy? The longest distance measured was 803 feet. These students can tell you about inertia,  $m_2$  = mass, gravity and how to make a

rocket. Would you stay and watch Pepsi bottles rocketing into the air? Wouldn't you want to push that launch button?

Step on over into the next natural area. There is a telephone pole standing amidst a grove of pine trees. There's a hanging wire attached at the top with a ball. A child, properly harnessed climbs thirty-five feet to the top. Could you do it? She jumps off into space and hits the ball. Her wire helps propel her back to the pole and she climbs down. Her teammates cheered her on through the process. Another girl climbs to the top. She chose not to jump. Again her teammates encourage her. One did not hear negative comments or judgments. She was not berated for not jumping. Each feat was acknowledged. In the picturesque challenge, one could see individuals being courageous and testing their own limits.

While observing these programs one component made an immediate impression on my whole being. The natural environment was the beautiful backdrop for the program. Both the Children's Art Program and Astrocamp are located in the mountains. The beauty almost seemed transparent to them since their camps are located there. As an outsider, I was struck by the beauty of the tall pine trees, clear blue sky and towering majestic mountains. It seemed as if



the participants no longer noticed their environment. Nature by its very nature is calming. It provides a sense of openness, freedom, and expansiveness not controlled by the walls of a school building. It's a creative force unto itself reflecting depth, complexity, change, light, shadow, life and death all in existence. What does such a backdrop provide for children seeking to bring something creative from their being?

I also noticed that the day seemed to have a purpose or a flow. The day did not seem as fragmented as in our classrooms today where the emphasis is on sets of standards. The population in each program reflects diversity as well. Yet another quality stood out as clear as the spring-green, sun-lit parachute roof. That was scene after scene of children constructing meaning and using their whole bodies. One could hear joy, excitement and discovery in the sounds of their words, their voices. It was intoxicating. I felt the child in me want to dance on the stage, paint loud bright colors, and jump from the telephone pole. These are just a few things I noticed from observing parts of each of these programs. Now, we'll look at the interview questions to see how the experiential learning components found in these programs are different from traditional education in the classroom.

## Findings and Results

Upon completion of the interviews, the results of the interview questions were examined. What will follow is a comparison of the three different experiential programs, as well as a summary and interpretation of the interview questions. All three programs contrasted themselves from traditional education. What are the commonalities as well as the differences among these programs? Are there any similar perceptions that emerge out of the three programs? Some of the interview questions yielded more material than others. As a result, some questions may be categorized together in an attempt to summarize material in a succinct manner. The first two questions attempt to get at the heart of each program as well as the programs use of experiential learning.

1. How do you define experiential learning?
2. How would you describe the emphasis in your programs?  
*(For example, is the focus on wilderness, arts or science? Is the focus project based or emotional/psychological based?)*

At its basic core, all three interviewee's described experiential learning as "learning by doing." As Mr. Brian Windrope indicated, "At Astrocamp what it means is that kids are doing things that are hands on, they're actually

manipulating things, there are no books...It's all experiential in the sense that they are all touching it, building it, creating it, physically doing it." Meghan Shearer of OBA, Inc. indicated, "Experiential learning in our program is doing, taking the kids out to the woods and learning through the process of being outdoors and facing whatever situation comes up." All three programs reflect the basic belief of all experiential theorists that students learn better through experience.

Each program focused on a specific discipline. The difference between the programs simply reflected the different disciplines being taught or focused upon. However, another result became evident out of the interview. Even though each program focused upon a specific discipline, the emphasis in each went beyond the subject matter at hand. There were results in other areas. Astrocamp focuses on activities in Astronomy and Physics. As Mr. Brian Windrope indicated, the students "learn about Astronomy, Physics and light in a curriculum sense. And we also do a lot of work...on team building, communication skills, problem solving, self-esteem, challenges." One can see that even though it has a specific science focus, the program itself goes beyond the subject matter.

When one compares Astrocamp to the Children's Summer Art Program that the different discipline focus is clearly evident. The Children's Summer Arts Program focuses on the arts. As Ms. Laurie DiRocco indicated, "Each of the arts we deal with, which is theater, dance, music, visual arts, painting, drawing, and ceramics are all expressive, so by their very nature they are experiential." Ms. DiRocco indicated that teachers and students are dealing with emotions. This element is not always directly mentioned or studied in the research.

In contrast to the above programs, the OBA program focuses on taking students into the wilderness to focus on the following five principles: physical challenge, ecoliteracy, and team building skills, leave no trace wilderness principles and career opportunities. According to Shearer, OBA's emphasis is wilderness trips. She indicated that there are psychological, emotional or educational elements depending on the trip and the nature of the students. Some of her students are from foster care agencies. She said, "They're on tons of medication and it's quite psychological. I have dealt with girls trying to mutilate themselves...It's quite emotional." On the other hand, she might have students working on a crew getting paid to complete a project such as planting trees

in Pasadena. A couple of students, on one particular crew were members of the Bloods. In this situation she said, "We were constantly doing gang intervention." OBA has an effect beyond the physical challenge of having students hike in the wilderness. Shearer states that the program touches on many other aspects like team building, on the job training, personal connection to the environment, community involvement and breaking career barriers. Shearer believes, "There is a magic that happens when you put your house on your back and act like a turtle and go into the woods for a couple of days."

Each program has a specific focus that is learned through the experiential process. Students are learning through an experience with art, science or wilderness. Yet, each director acknowledges that students are learning concepts beyond the discipline itself. This fits with much of the research on experiential education. As Dewey said, "To learn from experience is to make a backward and forward connection between what we do to things...Under such conditions, doing, becomes a trying experiment with the world to find out what it is like; the undergoing becomes instructions - discovery of the connections of things (p. 40). What we don't know is what changes are going on in the minds of each individual student. This

would be more evident if the reflection process was more consistently integrated in the learning process. All experiential theorists expose its value. Yet, it remains an element that is not consistently used. Student interviews would be a rich area for further research into the affects of experiential learning.

3. What population of students and age groups does your program serve?

Diversity of students is reflected in all three programs. However, OBA showed a significant difference in that the majority of its participants are low income, urban minorities. This is because the intent of the original program was to take culturally disadvantaged youth into the great outdoors. As Ms. Shearer said, "We were set up to work with low income and people of color because that is how the organization started." However, OBA will serve anyone in the Los Angeles area and participants are not restricted to low income minorities. In 1960, a teacher at Cleveland Elementary School, Helen Mary Williams started the Junior Audubon Society. She had seen a need for taking urban youth into the wilderness to learn about science. This organization evolved into what it is now called Outward Bound Adventures (OBA, Inc.). Typically students who participate in wilderness trips

range from eleven to eighteen years old. The work crews range in age up to age twenty-five.

Astrocamp serves a diverse population as well. The majority of students range from fourth through eighth grade. There are a few high school groups as well. According to Mr. Windrope the majority of participants are from public schools. However, it was evident that the diversity fluctuated depending on which public schools had allocated monies for such a program in their science curriculum or who had a commitment to raising monies. Recently many school districts have provided less funds to science programs due to increased, stringent requirements of standards based education.

Ms. DiRocco directs both the Children's Center and Junior Art Center. The age range is from five years to thirteen years of age. Students participating in the Children's Center are five through twelve and their program usually starts early in summer. Students participating in the Junior Artist's Center range from eleven to thirteen years of age. The Idyllwild Arts Summer Program is committed to providing arts instruction to a diverse population of all ages and abilities. To that end, it will provide scholarships to talented artists from diverse backgrounds. It is a private non-profit

educational institution and scholarships are awarded from funds donated specifically for that purpose.

Each of the three programs evaluated reflect a diverse population. However, OBA, Inc. serves a more urban, lower socioeconomic population as compared to the other two programs. This would make sense since OBA, Inc. was established to fill a need in the urban community. As Ms. Shearer stated, "Right now if you look at recreation statistics, African Americans are the smallest percentage represented in the usage of the forest. It's like 2%...Charles has told me some extraordinary stories because Miss Williams was taking them to Oregon and to the Sierras back in the 60's when there still was a lot of racial tension. There's a lot of racial tension today let alone 40 years ago. People were taken by seeing a group of people of color in the woods. It used to be during the 70's and 80's they said if you saw a black person up in the Sierra's it was an OBAer. That it was somebody from this organization." Overall, it is clear that each program has a commitment to providing a quality, educational experience to all students.

4. Can you give me a brief description of how "experience" is integrated in your program? *(For example, are the activities guided? Are students*



*given choice? Are the activities preset or do they evolve?)*

According to the interviewees, experience is an integral part of each of their programs. That experience is guided, extended through inquiry and then processed. Ms. DiRocco explained that all of the arts are experiential. "When they are learning dance, they are experiencing the movement. They are not reading them or learning them in their head. When they are painting or drawing they're doing it." She indicated that teachers come up with a plan but they work with the students if it takes another direction. This would fit in with experiential learning in the sense that teachers act as facilitators. According to the research, once teachers set up the environment they must react and monitor the learning process as it evolves. This requires that they be present to the process at hand.

Mr. Windrope also indicated that experience is a focal point of the Astrocamp Program. He stated, "The premise of the course is discovery, but it is guided by our teachers." Some classes are student driven and more inquiry based while others are demonstration based from the staff. Students do background work with their teachers at school before attending Astrocamp. The intent is to

have students building, making and discovering things rather than taking notes like in a traditional classroom. Students build things like rockets and Mars launchers. They stimulate repairing satellites under water. "Our goal is to have all of our classes maximize the amount of student driven experiences in them" says Windrope. Astrocamp is committed to its students learning and discovering new knowledge through experience.

Meghan Shearer stated, "The wilderness trips are complete experience. "It is not separated, so it is not integrated because it is experience." The purpose of the program is to take urban youth into the wilderness. Wilderness itself is an experience out of the ordinary for these students. The physical challenge of the hike is the experience. However, the staff does design team building and leadership exercises as well as teaching ecoliteracy and leave no trace behind principles. These activities are designed and guided. Students are given choice. The team leader or staff member facilitates the process. All three programs include the experiential element of teacher as "facilitator." According to Shearer, "based on what comes up in the conversation that the kids are having when the activity is happening is based on how you process it." So, if it is about attitude, you talk about attitude. If it is

about leadership, you talk about leadership. If it is about listening, you talk about listening. A leader has to be aware enough to notice what interaction is happening." Shearer has touched on the experiential belief that educators should adjust and monitor the learning process as it evolves. Dewey felt that educators should "give attentive care to conditions which give each present experience a worth while meaning" (p. 49).

This would be further supported by social constructivism which provides for more guided teacher involvement. As one can see all three programs mention that the teacher acts as a facilitator in the process regardless of the discipline or material being taught. It is evident that the quality of facilitation varies based on the experience, knowledge and awareness of the instructors. This is an area that could be further explored.

The above programs also allow for student processing of information learned. The difference seems to be in the amount of time given for processing and the point at which processing occurs. All of the experiential research indicates that this is a valuable part. Experiential theorists believe that once student's process the information, they gain new knowledge which will be used as

a connection for future knowledge. Mr. Windrope stated that students debrief about the academics when they return to their schools. Mrs. Shearer indicated students and staff members process in many ways during the wilderness trips and it seems to be ongoing throughout the trip. Often, staff members will have students reflect after specifically designed activities such as team building. Processing seems to be a strong element in the OBA program. The difference between the programs seems to be the amount of time given for processing and the point at which the processing occurs. All of the experiential theorists value the component of processing. Each program administrator mentioned its value as well. It is one component of experiential learning that is given different value and different modes of expression based on the program model. Even though processing is valued, there were no consistent guidelines given. In fact, it is unclear how strong that element is utilized in Astrocamp and the Children's Arts Program since processing was mentioned briefly. As a researcher, it would have been beneficial to develop further follow up questions to help clarify this point in each of the programs.

5. Are these experiences based on some larger, more comprehensive curriculum or is the curriculum based

on experiences themselves? Please explain and give some examples.

The programs evaluated allow for teacher discretion and creativity in the guided experiential curriculum. The programs are committed to providing experiential learning within the constructs of the discipline. They do not base their programs on larger defined curriculum such as the state standards. There are elements of each discipline that are being covered in an experiential manner. Therefore, some larger curriculum concepts are covered by virtue of the discipline itself.

Astrocamp focuses on the physical sciences and Astronomy. The founder, Ross Turner was a former teacher. He realized that the schools did not do a very good job of teaching students physical science. He designed Astrocamp as a place where students could explore and learn about the physical sciences through actual hands on experience of building, creating and blowing up things. According to Mr. Windrope there are some curriculum guides used to train the staff. However, teachers get an "enormous amount" of discretion in how they present and guide the scientific discoveries.

Ms. DiRocco also stated that the Children's Art Program does not base its curriculum on the state

standards. However, she felt many of those standards were covered given the comprehensive nature of the program and the experiential way in which the arts were taught. "For example, in the Junior Musical Theater, they're learning everything in the area of theater. They're learning about casting, they're learning about auditioning, they're learning about the dance, the movement themselves, they're learning about character." However, the Art Center doesn't tell the teachers what to teach. They tell them the areas they would like to cover (visual arts, musical theater, drawing, sculpture, etc.) but teachers have the freedom to include things they are excited about. Thus, teachers are given the ability to create and design the artistic experience for children. Ms. DiRocco particularly looks for teachers that are passionate about their subject "because the best teaching happens when you're teaching from your passion." "What I'm really looking for is that students get an experience that excites them and that comes from the teacher who is excited and passionate about what they are doing."

This fits in with Dewey's belief that experiential learning should stimulate a desire for students to continue learning. Constructivists also feel that students should participate in activities that allow them to

construct new meanings. Many art activities clearly reflect Howard Gardner's view that human beings have seven different intelligences from which to learn about the world. The teachers at the Children's Art Center involve students such that they use many of those intelligences in the artistic processes.

The OBA program bases its wilderness experiences on the following five principles: team building, career options, leave-no-trace wilderness principles, ecoliteracy and the physical challenge of a wilderness trip. OBA is similar to the other two programs in that it does not follow a larger, standardized state curriculum. Shearer indicated that there is new staff and they are looking at further defining OBA's curriculum. This program allows its staff and trip leaders to have creativity and discretion given the experiences involved in the wilderness trips. For example, one of the trip staff members is an astronomer who teaches lessons in astronomy. Other members are from REI and they teach mapping and compassing. Trip leaders teach from their area of expertise. What is unique is that often some of the leaders or trip staff have gone through some of OBA's programs when they were young. The program still seems to be evolving.

Shearer feels that many of their students are missing out on necessary life skills. One of its larger curriculum goals is that students are taught specific life skills so they can be employed and be valuable participants in our society. The OBA program also fosters a strong connection with the outdoors. Shearer also said, "I realize my goal is to have these kids connect with the environment. This cannot happen unless the kids are connected with each other. This can't happen unless they are connected with themselves. So we have to start here, to get these kids to know themselves, respect themselves, to love themselves, so they have the courage to then love, respect and honor the person next to them. So that they can have the courage to love, honor and respect this environment." As one can see this OBA staff member has brought her heart and emotions to the program. The program allows its staff and leaders to bring their talents to the table. Wilderness trips allow for the interplay between student and teacher.

This interplay clearly fits with the tenets of experiential learning whereby teachers look at the needs of the students before designing the learning environment. In all three programs teachers are encouraged to be creative and passionate as they guide student learning.



6. Please describe a typical day. What happens?

Each program provides an organized, purposeful structure. The topics taught are thematic according to the discipline being taught. The design and location of the programs provide many opportunities for students to be active. This emphasis fits in with all experiential learning theories, which expose students being immersed and active in an organized learning process.

The Children's Art Center and Astrocamp are more similar in structure since they are residential camps. Children begin the day by doing chores before breakfast. Then they begin their classes. Astrocamp students have classes from 9:00 a.m. to 5:30 p.m. The Children's Art Center has classes from 9:00 a.m. to 3:00 or 4:00 p.m. It is interesting to note that class period's range from one hour to an hour and a half. These time blocks allow for more depth exploration and immersion in the subject matter as compared to the traditional classroom.

The Children's Art Center has classes for younger students from 5-12 years of age and junior artists from 11-13 years of age. Students go to their respective areas, which are all outdoor covered or shaded studios. Topics include: multi-arts, musical theater, "Shakespeare's

World," photography, ceramics, painting and drawing to mention a few.

Astrocamp is similar in the sense that most classes are outdoors with the forest as a natural backdrop. Both the Children's Art Center and Astrocamp are located in the San Jacinto Mountains in Idyllwild, CA. Some Astrocamp classes are inside but involve an outside component as well. Classes include such topics as lights and lasers, solar astronomy, electricity, magnetism, rocket building and micro gravity. According to Windrope, Ross Turner, who started the company, "had a gut level understanding, that doing things outside experientially was better than what he did with his kids inside the classroom." Not only are students immersed in their discipline area they are immersed in the beauty of the forest. I myself felt the effects of that beauty purely when observing the students in the outdoor classes. The immersion in subject matter is supported by experiential theorists and constructivist theorists. It fits with the new brain based research as well. According to Crowell, Caine, and Caine, "orchestrated immersion," allows for students to "learn best when immersed in multi layered experiences" (p. 12). What could be more multi layered than making science or art projects outdoors?

Both programs offer activities after their regular classes. Some include fun camp activities such as swimming, while others include activities related to the specific discipline. After dinner, Astrocamp has an evening program from 7:30 to 9:00 p.m., which will include various activities such as a night hike or student use of telescopes. This is considered one of their premier programs. Students are actually looking at stars and planets in the night sky as opposed to reading about them in a book. According to Windrope, Astrocamp is unique because "no one in the county does residential astronomy and physics education." He indicated that most camps teach outdoor education. In this sense, it would be interesting to further investigate the quality of student knowledge of astronomy and physics at Astrocamp as compared to the knowledge of their peers in a traditional classroom. Students are clearly active participants in their learning throughout the day.

The Children's Art Center also provides opportunities for students to be actively engaged in their discipline after regular class hours. Immediately after classes, students from the different arts get together in a theater area to share something they made during the day. I observed students excitedly sharing photography, poems,

songs and ceramic pottery just to mention a few of the items. One student recited part of a now and then poem. "I used to be a horse made of shattered glass, but now I'm made of the moon." Clearly, this was an opportunity for the artists to see the work of the other artists. As an adult, I found myself choosing the classes I wanted to try next. As DiRocco indicated, we want to encourage a sense of community as well as broadening their horizons. "If they're here to do dance, give them a sense of the theater, give them a sense of what's happening in photography because they may end up wanting to try one of those classes at another time." There are also evening activities at the Children's Art Center as well. Activities could include a dance, scavenger hunt, or a Coffee House. As DiRocco said, "Because the kids are all artists that come here, they will put on entertainment for each other." The camp entertainment is after class, but the emphasis is on the arts. As one can see the program allows students to be actively participating and immersed in the arts throughout the day.

Outward Bound Adventures (OBA) is similar to the other two programs in that it provides an organized purposeful structure. Students are actively participating in hikes and specific activities in the wilderness. They

are immersed in natural environments, which are totally different than their urban environments. The program is designed to teach students about their own values as well as the natural environments. OBA is different than the other two programs in that the structure may be organized around one day, three day or ten day events in the wilderness. OBA uses the local outdoor environments to teach a variety of principles as well as to challenge students to go beyond their physical limits and knowledge. Its vision is to "provide nature-based education that promotes positive self-development, environmental responsibility, and outdoor career exposure for low income at risk and urban youth." For example, students went canoeing on the Mono Lake in August 2002. They studied brine shrimp and brine flies that survive by trillions in an environment where no other living things live. Another group hiked down Topanga Canyon (Southern California) in February 2003 to experience a waterfall and a hidden cave. These are just a few of the local environments that are utilized.

On short trips the day is organized as follows. The staff does a name game in the morning to promote team building. Once they arrive at a site they do a team building activity and they proceed on the hike. Students

are given a question of the day to think about during the hike. For example, the question might be "What do you want to achieve in life?" or "What is it that you look forward to?" Students have lunch and then they hike back down.

Throughout that day staff members teach values clarification, ecoliteracy and leave no trace principles. Essentially students are learning about local ecosystems, how to use and take care of the environment as well as participating in the physical challenge outdoors. At the end of the trip the staff and students process the question of the day. As one can see the program provides for learning by doing and reflection throughout the activities. OBA has defined a structure that is unique to its own wilderness adventure program. Students are immersed in nature and the physical hike by its very nature is active and experiential. Again, the beauty of nature provides an incredible backdrop for learning outdoors.

Outward Bound Adventure (OBA) also has a ten-day-backpacking trip into the Sierra's. Students go to the Golden Trout Wilderness Camp and spend the first three days at base camp where they learn the basics of camping as well as any other curriculum. The remaining seven days are spent breaking down camp, hiking up mountains, and setting up camps. Students hike the first day to get used

to the 11,000-foot elevation. Students learn team-building skills as one group sets up the camp and the other group cooks breakfast. Students also learn values clarification, ecoliteracy and leave no trace principles much like the students on the shorter trips. The students hike on trails and they process questions. "But a lot of it is the experience of getting the kid up the mountain, getting them over Army Pass, getting them to stay strong," said Shearer. "So you have big time gang bangers that are crying like this is the hardest thing I've done in my life." This is part of the wilderness experience that deals directly with the physical challenge of making it up the mountain.

There is a structure to the trip and yet there is much room for creativity. This would fit in with experiential theorists who believe that a learning experience should be organized with a purpose and then once in an experience, the teacher facilitates what comes up. Clearly, the staff personnel know what principles to cover but they'll have to be present in the moment to facilitate student learning and breaking through the physical challenges of the hike. By its very nature students are hiking, camping, and experiencing the wilderness. Staff members bring their own expertise and

passion to bear on the students' experience of the wilderness adventure. According to Shearer, sometimes staff members don't have time to process during the day. Therefore, they are encouraged to process the events with their students at the end of the day.

This program clearly utilizes a reflection process, which is espoused by most experiential theorists. The nature and depth of the reflection would change given the background/expertise of the staff members as well as makeup of student groups. The reflection process at OBA seems to be utilized more on an ongoing basis when compared to the other two programs. Most experiential theorists believe that once people reflect upon an experience, new understandings emerge. All three of the programs have a reflection component. However, the one used by OBA seems to be a more conscious, integral part of the student's wilderness experience. Again what is difficult to measure in all three programs is what new knowledge emerges. This reflection component would be supported by Crowell, Caine, and Caine's research where the authors discuss, "active processing." The researchers felt that there are both the "contemplative" and "interactive" aspects that take place during the experiential learning process.



The OBA program seems to give more opportunity for the contemplative element. Students are encouraged to think about the question of the day during the hike. On longer trips, students do thirty minutes of silence at dinnertime. Students then interact with staff members and other students and share their thoughts. They process their experiences at the end of the day in a completion circle. As supported by Vygotsky's research, students learn and solve problems by interacting socially with others. Clearly, they are "negotiating meaning" when participating in OBA's completion circles. As Shearer indicated, "we realize together what these kids are missing is voice." Shearer believes that at risk urban youth need to be given an honest, open and trusting space to say whatever they want. Further research could examine both the contemplative and interactive aspects within the context of experiential learning.

7. What theoretical models inform what you do in your planning or in your curriculum development?

When reviewing the three programs, it is evident that the specific discipline guides the overarching curriculum. Few theoretical models or experiential theorists were mentioned with respect to planning or curriculum development. However, the director's actual educational

background and work experience seemed to influence their perspective on the value of "experience" utilized in the program.

According to DiRocco the faculty didn't have time to meet and talk about theory. Although, she did mention that John Dewey, Jean Piaget, Howard Gardner, and Lev Vygotsky were some of the people that impacted art education from the perspective of learning from experience and building your own knowledge. However, she said that there's not much theory going on because the arts by their very nature are experiential. DiRocco said, "Art is a language; you have to learn that language." "So, art is about language. Very simply put, it's probably the language of the soul. Children come alive when they can express through dance and music and painting and drawing and theater because it's really expressing what's inside, it's expressing what we feel."

Mr. Windrope indicated that he had worked in experiential education and he did his Masters in education. So he is aware of the research. He particularly is influenced by the 2061 Science Project, the National Science Standards and the North American Association of Environmental Education (NAAEE). Also, he has worked in environmental education for his entire life. He worked at

the Yosemite Institute and was leaving Astrocamp to be the Executive Director of an environmental education organization in Oregon.

Meghan Shearer believes that OBA is still in the process of defining the curriculum. She is relatively new to OBA. I believe this question could have been investigated more thoroughly if I had interviewed the director, Charles Thomas. She indicated that they are working on the relationships between environment, self and community with respect to their at risk urban youth population. Mrs. Shearer's background in environmental education and ecology impacts her perspective in her new position. She taught environmental education to Tibetan refugee kids in Northern India. Initially, she studied physics and "wanted to be on the verge where science and spiritually meet." "Now, the education hits my heart," replied Shearer.

8. Have you worked in non-experiential settings? What kind?

Two of the three interviewees have some experience in non-experiential work settings. Overall, most of their work experiences are in fields that are conducive to experiential learning. Their educational backgrounds also

seem to lend themselves to being involved in experiential settings as opposed to non-experiential settings.

Mr. Windrope worked in an environmental education after college. He worked at Yosemite Institute teaching students science in the national park. While getting his master's degree, Mr. Windrope worked in the public school system, which he viewed as non-experiential. He taught seventh grade science. He taught science for ninth through twelve grade students that were at risk of being kicked out of school. Mr. Windrope also taught a tenth grade honors biology class and ran a writing center. Mr. Windrope left his position at Astrocamp to be Executive Director of an environmental organization in Oregon.

Ms. DiRocco also has experience in the public school system. Yet, she said she had not worked in non-experiential settings. DiRocco indicated, "I don't know that any setting is completely non-experiential. She has taught for thirty years in both public and private schools. Ms. DiRocco taught kindergarten in the regular schools. She has a bachelor's degree in fine arts and she has been an art teacher in both elementary and high schools. At times, she has taught college courses in art for teachers. Most of her experience is directly related to hands on learning.

Ms. Shearer has some experience in non-experiential settings. She has worked as a waitress and she has worked in labs. During her undergraduate career, Ms. Shearer designed a track in environmental studies doing ecology with Tibetan refugee kids. After graduating, she went back to India as a staff member to teach people about basic waste management. Ms. Shearer came back to the United States and got her master's degree in Environmental Education. She is now excited to be teaching at risk students at OBA.

9. How would you describe the difference between experiential learning and more traditional forms of learning? *(For example, are there different outcomes, processes, methodologies and/or skills?)* Please explain and give some examples.

The interviewees described several differences between experiential learning and the more traditional learning in the classroom. First, experiential programs allow for greater physicality of learning and more accessibility to move in open spaces. Experiential programs also provide more opportunities for social involvement and generate higher student interest/motivation. Both Windrope and DiRocco said that students in traditional public schools are limited in

their physicality. Most classrooms have 30-35 students and little space for students to be active. Often they are required to sit in their seats all day. As Windrope said, "The significant difference is that it is against human biology to ask a student between the ages of five and thirty to sit in a desk for eight hours a day." DiRocco said she sees "a lot of kids sitting in their desk learning from their heads up. "There's no body in it." "There's no trying things out." Being physically active is one characteristic that is mentioned over and over by all of the experiential theorists.

Shearer said that traditional education approaches students more like a machine rather than "a spiritual being on a path." She said that it comes from a patriarchal view which focuses on competition, individualism and creating good workers for our capitalistic society. In comparison, she believes that experiential education focuses on students as human being with feelings, emotions and a connection to the "larger web of life." This approach focuses on cooperation and community. Shearer believes, "the outcomes are different because in one you're training somebody to be a good worker and in the other you're training them to be a good human being."

All three interviewees believe that traditional education focuses more on rote learning and getting the right answer. Windrope said, "The bureaucracy of the education system is based on quantifying student performance on very narrow measures."

DiRocco currently works in the public schools and she feels students aren't learning to think for themselves. "They're learning how to memorize. They're learning how to give their teacher the right answer. I think it is deadening our souls too."

In contrast experiential education gives students opportunities to experiment, discover, ask open-ended questions as well as explore several solutions to a problem. Each program has small groups, which help facilitate this type of learning. Such learning fits in with Piaget and Vygotsky, who believe students construct their own knowledge through hands on learning with objects and other players in the rich, social environment.

Student interest and engagement are a natural outcome of experiential education according to both DiRocco and Windrope. DiRocco said, "I think the difference is that in the setting where I see experiential learning there's a lot of joy in learning." Windrope reiterated that point by saying that students are excited to learn and they have

different concepts of themselves. Windrope stated, "The purpose of education to me, after you have facilitated this initial process, is to get kids excited about learning."

10. What do you consider to be the advantage of experiential learning in general and your experiential focus in particular?

Throughout the interviews, the interviewees suggest there are many advantages of experiential learning. One of the most consistent advantages mentioned is the joy of learning. DiRocco mentions that this joy of discovery is a result of trying things out and using their whole body in the process. Another advantage mentioned is the ability to construct new knowledge through active participation as well as overcoming personal challenges. Students construct new knowledge using cognitive, physical, social and emotional aspects of their being. As Shearer said, "I think our experiential focus in particular is allowing them to go through that process of overcoming obstacles and negative emotions." Out of that experience, students come to know themselves much better as well as overcoming challenges and acquiring new knowledge. Windrope feels that students have different opportunities whereby they learn teamwork, cooperation, problem solving and respect.



All three interviewees believe that the advantages of experiential learning are many. They consistently mention the joy of learning, and acquisition of new knowledge which can affect the cognitive, physical, social and emotional makeup of students.

11. In what ways do you think this form of learning could be incorporated into traditional settings?

Two of the interviewee recommended that experiential learning could be more easily incorporated into regular classrooms if educators kept class size small, analyzed use of classroom space and rewarded more open-ended thinking. The other interviewee recommended revamping the entire public education system. After some reflection upon the current situation, she recommended that teachers return to what they know is good teaching within their own classrooms. In addition, she recommended that other subjects like science, history, music, and art be reintegrated back into the traditional school setting.

Mr. Windrope indicated that he would cap every class size in American to include not more that twenty students. He believes that teachers cannot facilitate and conduct meaningful group processes when dealing with thirty-five students in a class. Also, he recommended that all classes should be at least an hour to an hour and a half in

length. This immersion into longer time blocks in a rich learning environment is supported by brain-based researchers Crowell, Caine, and Caine. Windrope believes that teachers can't develop meaningful relationships with a large number of students squeezed into thirty-five minute classes. Windrope commented, "When I was teaching seventh grade in high school, it was heart-breaking to me. I had five classes of thirty five kids and thirty five minutes of class." He indicated that all of the educational paradigms are true. "You end up teaching to the kids who are the most troubled, or you end up catering because you are burned out, to the kids who are nice, successful kids, so to speak."

In comparison, Ms. DiRocco said many of the classrooms are small and there's little room for learning areas. She recommends that teachers look at the physical environment to see if they can get rid of desks and create learning spaces. She believes that this would allow students to be more physical and actually have space to engage in experiential learning. This concept would fit in with constructivist theorists like Piaget who believes that students should be able to physically manipulate objects in their learning environments in order to construct their own knowledge. Also, DiRocco believes that

teachers could reward and honor more open-ended thinking in the traditional classroom. She said, "When I taught kindergarten, I'd ask questions. Good thinking. What's another idea? I'd get twenty different ways of doing something in ways that I'd never thought of myself." This process of honoring and valuing open-ended inquiry is supported by the research in the arts and science programs.

Ms. Shearer's comments reflect a different view from the other program directors. She admits that it is "an anarchist perspective." "Kick out George Bush and this No Child Left Behind. Politics has no place in education. I think eradication of national standards, eradication of state standards but with that there's a whole demise of the system." Shearer believes we need to think outside the box and redefine the purpose of education in America. However, with respect to the current climate in traditional classrooms, she believes that subjects like art, science; history should be reintegrated and taught in the schools. Teachers need to "reclaim the classroom," teach creatively and challenge the standards. Shearer believes change starts with the individual teacher. Then teachers need to reconnect with the local community to work for change in the schools.

The program directors felt that experiential learning could be incorporated into traditional classrooms if there was smaller class size, longer class periods, better use of physical space and reintegration of other subject areas. These seem to be the practical recommendations given the limitations of the current educational system.

12. How would you describe the effects of experiential learning on the students you serve?

All three directors indicated that experiential learning positively impacted students self esteem and academic achievement. According to DiRocco's observation, the experiential art program affected student growth in their particular art discipline. Ms. Shearer also said that the wilderness program promotes environmental responsibility. As McAvoy and Lais (2003) indicated in the literature review, outdoor wilderness programs promote "stewardship for the environment." Mr. Windrope indicated the Astrocamp sparks a higher level of performance in science in their classroom. "Kids form an intellectual and emotional connection to the world, the planet that we live on, which when informed by science, it's not just emotional. It's an understanding of life cycles, an understanding of mineral cycles and water cycles and their connection to the planet, and food cycles and where do we

get our food.... All of these things give context to kids they don't get from watching television..." According to the literature review, higher academic achievement is one result cited by researchers in all three fields. It's interesting to note that a connection to community and the environment is an aspect that the three directors mention briefly. The conditions that foster a child's connection to place or the environment would be an area for further research. Mr. Windrope and Ms. Shearer state that experiential learning also positively affects leadership skills, teamwork, and problem solving. Ms. Shearer added some other positive affects. She believes that OBA gives students opportunities to connect with students from different backgrounds, promotes exploration of career opportunities as well as foster students' sense of working as a community.

13. Do these effects occur in stage-like transitions or are they more unpredictable?

With respect to question thirteen, all responses were brief and vague. All of the interviewees indicated that there are positive effects of experiential learning. As a researcher, I was attempting to ascertain if the effects occur in stage-like transitions or if they were more unpredictable. Ms. DiRocco indicted that it was difficult

to answer the question since teachers have the students for short time periods in the summer. She said, "Students feel successful" about their work. Yet, it is more difficult to assess growth since it's not over a longer time period like the school year. Ms. Shearer said the effects are "unpredictable, depending on the youth." In contrast, Mr. Windrope said the changes take place in stages. As a researcher, I'm not sure if the question needed to be clarified or eliminated.

14. Do you receive feedback from teachers, parents, students, etc.?

All three directors receive feedback from teachers, parents and students. Most of the feedback is positive. However, feedback is informal in nature and it occurs through conversations and observations. Parents can fill out written evaluation forms for the Children's Art Center and Astrocamp. Ms. DiRocco stated that she strives to be in every class every day in order to check with students and teachers. She indicated that a high percentage of students return to the Children's Art Center to repeat classes or to take new art classes. Ms. Shearer also said that many of her students return to go on other wilderness trips. The only negativity they usually hear is that students feel that they "physically challenge them too

much." Mr. Windrope said most responses are favorable and students often say that Astrocamp was their favorite experience in elementary school.

15. Does experiential learning work? How do you know?

16. What tools do you use to evaluate or measure the results of experiential learning?

Each director asserts that experiential learning works based on the results they observe in their specific programs. Mr. Windrope said he knows experiential learning works based on "teacher evaluations, informal processes and an enormous amount of talking to teachers and kids." Ms. Shearer believes experiential learning works because she has witnessed students overcoming obstacles as well as thinking and experiencing new things.

All three programs seem to be lacking in quantitative measures or tools to evaluate the results of experiential learning. Instead, two of the directors refer to an evaluation form that is often given to parents at the end of the course. The Art Center has an evaluation form for parents, which rates the programs on food, facilities, and classroom instruction. Most of the forms that are returned are positive. In comparison, Ms. Shearer said they are lacking an evaluation tool at this time. Overall, most of the results are evaluated from an observational

perspective. As DiRocco admits, "we're not doing any kind of diagnostic stuff with pre-testing or post-testing.... Because our time with them is so limited and because we don't know who is going to be returning next year." These written and informal evaluations reflect more of the adult perspective. There seems to be a need for more quantitative research in the results area.

17. I'm really interested in transformative shifts that may occur. From your experience, are there examples of this that comes to mind? Are there factors that seem to be especially important?

The three directors describe shifts that occur in student's personal relationships with others, self-esteem and acquisition of new knowledge/skills. They also describe growth that occurs in the student abilities to face fears, take risks, and try on new leadership roles. Most of the directors preferred to address such changes as shifts or growth rather than transformation.

All of the interviewees immediately thought of relationships they had experienced with "difficult" students that evolved into a positive, fun outcome for the students. They felt that difficult students, given different environments and learning opportunities were able to succeed in roles they would not otherwise be given



the opportunity to experience. Mr. Windrope indicated that teachers from traditional schools would often warn him of difficult students. One teacher said, "Brian, I want to let you know that we're going to have this kid named Bart. I tell you, he is nothing but trouble..." Mr. Windrope said, "Bart was the best kid I had that week. By the end of the week he was everyone's favorite kid. He was a superstar." He was a student that excelled in an outdoor environment. Mr. Windrope indicated that his program allows students to be active in an outdoor setting where they can develop leadership skills and new relationships with teachers and peers. It also presented many experiential opportunities for learning about science in a fun way. Each director mentioned that most students developed positive relationships with teachers and peers. They were also able to function in leadership roles or succeed at physical tasks not normally available to them in a regular classroom.

The interviewees mentioned that students acquired new skills and academic knowledge in their particular discipline. They also said that many students overcame fears and took more risks. Ms. DiRocco said, "There are kids in our musical theater who will be getting up singing and dancing in front of a huge crowd and that in itself,

to be able to do that will cause a shift in self-esteem, a sense of their ability and their willingness to take risks." Ms. Shearer also indicated that students take many new risks hiking in the wilderness. She witnessed, "An amazing breakdown of character and willingness to try new things and a willingness to face those fears through knowing they were in a safe and trusted place." In contrast to the comments of the other two directors, Ms. Shearer spoke directly about trust and safety. I believe those conditions are implicit in the other programs. However, these characteristics are more overtly talked about in the OBA program since they are dealing with an urban, at risk population.

Ms. Shearer was the only interviewee willing to describe the changes students go through as transformative. However, she believes that other conditions are necessary to ensure lasting change. She realizes that many of the students go back into a negative environment after the wilderness trips. Ms. Shearer believes there needs to be continued support for these students through additional programs and community involvement. She also believes "you can create more rights of passage by taking the kids on more trips." Ms. Shearer believes that teachers should educate from a "spiritual

perspective." "We have to work on ourselves as we work on the kids but we're always supporting each other." Both the area of rights of passage and educating from a spiritual perspective would provide opportunities for future research. Finally, Ms. Shearer indicated the challenge for experiential education is "to provide people or their kids or the people I work with tools, once they leave the experience, they're still able to process. So, they have their own toolbox." In other words, students and adults could apply techniques learned to their own personal issues in life.

Each director clearly indicated that most students go through a shift or growth in their experiential program. It just was difficult to ascertain the degree and quality of the shift. Mr. Windrope said, "I do believe that every kid has a shift. I think it is safe to say that every kid has a good time." Ms. DiRocco said that students feel good about themselves and their abilities. "So, in transformation, I think that's our biggest delight, their sense of pride and their sense of who they are and being able to do it." Ms. Shearer said, "Their transformation is permanent in that individual's experience." However, she felt other factors needed to be continued in order to ensure that students didn't fall back into habitual

patterns. Experiential theorists believe that shifts occur and result in new knowledge. These shifts seem to occur more frequently when more of the whole person is involved in experiential learning environment. What causes those shifts? How do educators know when it occurs? What factors cause transformative shifts to be permanent in the fabric of a human being? I believe the area of transformative shifts is one for further research.

18. Finally, if schools were to be more experiential what kind of training would teachers need? 19. Where would this training most effectively be obtained? (*For example, universities, workshops, etc?*)

All three educators differed on their perspectives concerning the above questions. Mr. Windrope believes that one needs to hire teachers who have a lot of talent. Ms. DiRocco believes that teachers first need to experience the joy of experiential learning for themselves. She felt that teachers could obtain such training through universities or workshops. Ms. DiRocco believes that it would be more effective for teachers to go to universities that have demonstration schools. That way they could observe teachers using experiential learning methods. She said, "Like at UCLA, when teachers come in to see how we are teaching kids, they get so excited." Ms. DiRocco feels

teachers should observe how it is done and then they have the opportunity to see kids getting excited and being joyful about learning.

Ms. Shearer took an entirely different approach to training teachers in experiential learning. She feels that teachers should approach education from their own spiritual perspective. Ms. Shearer would like to develop workshops or teacher trainings where teachers would go through their own processing so they could understand the importance of being on their own spiritual path. She also believes that teachers handle a lot of "crap" and they need a safe place to process that. She said then teachers can come together in gratitude and re-establish why it's great to teach. More importantly, to acknowledge spirit and talk about it since it is different than religion. She said education needs spirit and she does not view that as religion. Shearer indicated, "The teachers have to be willing to know that there's a spiritual dimension in which we're dealing with these kids and it goes into the emotional and it goes into the intellectual." This perspective is very different from most educators. I believe that educators do not leave their spirits behind when they walk into the classroom. However, spirit is not talked about for fear of it being linked to religious

views. It is an interesting perspective. Are teachers on a spiritual path? Are they present in the moment? Spirit was rarely mentioned in the educational research. The effect of spirit in education would be an area that would merit further research.

20. Is there anything else you would like me to know?

Mr. Windrope said that the quality of science instruction that is offered by county programs is not as high as the quality of programs at private facilities. He believes the county teachers are not as inspired and the classes are larger. In comparison, he said we have more discretion on who we can hire and fire than county programs. Therefore, private facilities like Astrocamp can hire teachers with talent and teachers that are passionate about their work.

Ms. Shearer indicated that OBA was started by a teacher, Helen Mary Williams, in 1960. She was an elementary teacher that saw a need to take inner city kids into the wilderness. Initially, the program was based on the science curriculum. It has evolved over time to include more programs. OBA is known for its wilderness programs, having leaders that volunteered in the ranks and having strong ties to the community.

Ms. Shearer also said that the basic principles of experiential learning are still true today. She said it doesn't have to be done in the wilderness. According to Shearer, "You can do experiential education without going anywhere. It's just your approach and your intentions and the teaching style and what you're really trying to accomplish. Hopefully, we'll live in a day where all schools will have an experiential component because it's essential that these kids learn how to feel and how to verbalize what they feel."

## CHAPTER FIVE

### CONCLUSIONS AND RECOMMENDATIONS

Education has long espoused the value of teaching and nurturing the whole child. However, as a result of the No Child Left Behind law, educators have moved away from this theory of education. Instead, education has mainly focused on the cognitive aspects of learning in relation to math and language arts. It's as if we have been educating students from the "neck up."

Experiential learning, the subject of this thesis, is effective because teachers construct rich environments in order to provide opportunities for open-ended inquiry, discovery, and problem solving. As we saw in the research, experiential programs had specific elements that were to be taught in the discipline. Yet, they allowed for flexibility and openness in the program such that creativity or new discovery could emerge. Also, the programs observed, demonstrated that learning outdoors in nature or in the wilderness added a positive dimension to this new discovery. Teachers just need to be present in the moment in order to facilitate the new learning as it occurred. Currently, teachers are often required to teach standards in a uniform way. If one were to peek into many



classrooms today, one would see teachers marching through chapters in textbooks with little room for physical movement, creative exploration or spirited discourse. The No Child Left Behind law has stripped away our teachers' passion, creativity, and unique talents in exchange for standardized presentation of material in attempt to raise test scores.

Why is experiential education effective? First, it allows teachers to teach from their passion or strengths in a particular discipline. Today, teachers are molded into presenters of standardized materials. Teachers in experiential learning programs take into account students' needs before setting up the multi-faceted learning environment. Traditional educators rarely do that since they have massive state curriculum standards that they are required to teach at their individual grade levels. Experiential educators facilitate students in the learning process rather than dictate information to them.

Also, experiential learning is effective because such learning embodies the whole person. The research and the programs observed emphasized that students "learn by doing." This very aspect includes more of the different modalities. As a result, students internalize their new knowledge on many levels. Their learning often extends

beyond the subject matter at hand. The research indicates that positive shifts occur in self-motivation, self-esteem, leadership skills, teamwork, problem solving skills, the acquisition of new academic language and in students' relationships with others. These are just some of the areas positively impacted by experiential learning. Areas for future research include environmental responsibility, rights of passage, connection to community, a child's relationship to place/nature, educating students from a spiritual perspective and elements that result in transformative shifts in learning.

Third, experiential learning is effective because students are given opportunities to reflect on the new learning they've acquired as a result of the experiences. Often this reflection takes place internally (in their minds) as well as externally (when they share in groups or with the teacher). This self-reflection is a process that teachers could easily implement in the classroom through writing, pair-share or in group discussions. Reflection allows students to internalize their new knowledge. They create new knowledge from which to connect future learning.

In reality, there are some obstacles to implementing experiential learning in our current classrooms. First of

all, the No Child Left Behind law poses the greatest restraint on such teaching. Teachers are being asked to focus on math and language arts in order to improve standardized test scores such that all students achieve "proficient" on state tests. If students score "below basic" or lower on the state tests they must be given at least thirty extra minutes of reading each day. As a result, these students often miss out on other subject areas such as history and science. Due to such restrictions, teachers are required to teach in a more standardized way. This style or delivery of teaching limits their passion and creativity as well as their design of experiential projects. Therefore, students have fewer opportunities to explore and discover knowledge through open-ended inquiry processes. Should educators begin to reintegrate other disciplines (science, history, art, music) into the classroom instruction, this would again provide for some of those experiential opportunities.

Class size and physical space are other obstacles to the experiential learning process. Most classrooms do not have enough space in order to allow for learning centers or physical movement, which is often necessary when participating in experiences. Also, many classrooms have

thirty or more students. This again restricts the physical movement of students as well as presentation of materials and hands on learning experiences.

Even though there are obstacles, I would argue that the benefits of experiential learning outweigh the drudgery of focusing on test scores. Both the research in the literature and the research from the three different experiential programs delineate many wonderful advantages of learning through experience. The most significant one that plays in my mind and my heart is the joy of learning. It's why I went into teaching. It's why most educators went into teaching. In this process, I keep returning to the heart of teaching. I have returned to my heart. We have a desire to inspire the joy and love of learning in our students. All of the research points to this joy - this motivation - this desire to learn more as a positive outcome of experiential learning. Out of this joy for learning comes new knowledge. We, as teachers, tap into more learning modalities. Students overcome fears, and personal challenges through experiential learning.

This thesis suggests that regular classrooms can learn much from various experiential models. From the models I observed, we discovered that experiential learning alters the cognitive, physical, social and

emotional fabric of our students. We see positive shifts in self-esteem and in their relationships with others. This new knowledge is often transformative in nature. Yet, it is not new. This has been a process of rediscovery. This thesis confirms and brings together what I have known deep down. Educators remember what learning is about. They remember the joy of the experience. It gives credence to what we know as teachers, as professionals. Standardized testing and the No Child Left Behind law are deadening our souls. Excessive testing and standardized teaching have been stamping out the very essence of good teaching. As educators and teachers we need to recover what has been lost. We need to bring together what we've known to be good teaching. This thesis supports the notion that experiential learning must be an aspect of all good teaching. Removing the obstacles to the integration of experiential learning in our classrooms and schools, provides the necessary steps to begin this healing process.

APPENDIX A  
INTERVIEW QUESTIONS

## INTERVIEW QUESTIONS

1. How do you define experiential learning in your program?
2. How would you describe the emphasis in your program? *(For example, is the focus on wilderness, arts, or science? Is the focus project based or emotional / psychologically based?)*
3. What population of students and age groups does your program serve?
4. Can you give me a brief description of how "experience" is integrated into your program? *(For example, are the activities guided? Are students given choice? Are the activities preset or do they evolve?)*
5. Are these experiences based on some larger, more comprehensive curriculum or is the curriculum based on the experiences themselves? Please explain and give some examples.
6. Please describe a typical day? What happens?
7. What theoretical models inform what you do in your planning or in your curriculum development?
8. Have you worked in non-experiential settings? What kinds?
9. How would you describe the difference between experiential learning and the more traditional forms of learning? *(For example, are there difference outcomes, processes, methodologies and/or skills?)* Please explain and give some examples.
10. What do you consider to be the advantages of experiential learning in general and your experiential focus in particular?
11. In what ways do you think this form of learning could be incorporated into traditional settings?
12. How would you describe the effects of experiential learning on the students you serve?
13. Do these effects occur in stage-like transitions or are they more unpredictable?
14. Do you receive feedback from teachers, parents, students, etc?
15. Does experiential learning work? How do you know?
16. What tools do you use to evaluate or measure the results of experiential learning?
17. I am really interested in the transformative shifts that may occur. From your experience, are there examples of this that come to mind? Are there factors that seem to be especially important?
18. Finally, if schools were to be more experiential, what kind of training would teachers need?
19. Where would this training most effectively be obtained? *(For example, universities, workshops, etc.?)*
20. Is there anything else you would like me to know?

APPENDIX B

INTERVIEW LAURINE DIROCCO, DIRECTOR OF THE  
CHILDREN'S CENTER



LAURINE DIROCCO, Director of the Children's Center

1. How do you define experiential learning in your program?

I don't know that I have ever defined experiential learning in my program, but because of the nature of the program, it centers around the arts. And the arts are by their very nature, they are expressive. Each of arts that we deal with, which is theater, dance, music, visual arts, painting & drawing and ceramics, are all expressive, so by their very nature they are experiential. As you are learning you are experiencing the learning. As you are expressing, it is an experience. So I think it would be in the doing.

2. How would you describe the emphasis in your program? *(For example, is the focus on wilderness, arts, or science? Is the focus project based or emotional/psychologically based?)*

It is very much art based, and that's the focused. We are very fortunate at the Children's and Junior Arts Center in that all of the teachers are very experienced teachers in their own right. So they are dealing with emotions. They are dealing with their students as whole, but the focus is on the arts. That's what the kids are here for. *Are the teachers trained in the arts specifically? Do you look for that when you hire them?* Yes. All of the teachers are artists in their own right. They are not only teachers but they are practicing artists. All of them make their living in their specific focus.

3. What population of students and age groups does your program serve?

Our population...I direct the Children's Center and the Junior Art Center. It's called the Children's Center because it starts with the youngest ones early in the summer and as we go along the kids get older and the younger ones drop off. So it morphs from the Children's Center to the Junior Art Center. So the age range throughout the summer ranges from 5 - 13 and then they would graduate and go into the Youth Program, which is high school. That is another program. Idyllwild Arts has several programs: the Children's Center and the Junior Art Center, which is what I direct. Then we have the Youth Program, and that's all high school under another umbrella. Then we have adult programs. There is an intensive Poetry program in the summer. We have a Native Arts Program where all of the native artists come in from all over and they teach adult programs. So there is a whole lot going on around the campus.

4. Can you give me a brief description of how "experience" is integrated into your program? *(For example, are the activities guided? Are students given choice? Are the activities preset or do they evolve?)*

Yes to all of it. They are experiential by their very nature. When they are learning dance they are experiencing the movement. They are not reading them and learning them in their head. When they are doing a painting or drawing, they're doing it. They're learning in the doing. All of our teachers come with a plan, but as you know, any good teacher will follow their students; what their interests are. Does the interest grow here? Okay then we'll concentrate there. So the answer is: all of the teachers come with something in mind that they would like to do.

with their students, but as they work with their students it may take another direction and it may take another emphasis.

5. Are these experiences based on some larger, more comprehensive curriculum or is the curriculum based on the experiences themselves? Please explain and give some examples.

What do you mean based on the experiences themselves? *I think what we're trying to get at, sometime there's a larger curriculum and sometimes there are just experiences.* For example, we are not guided like in public schools by the state standards. When a teacher teaches here, they don't have to look to the state standards to see "Am I meeting all of these requirements?" However, in all of our programs I know that the state standards are being met because by the very nature of the way these teachers teach and the program is such a comprehensive program. For example, in the Junior Musical Theater, they are putting on a complete production. They are learning everything in the areas of theater. They're learning about casting. They're learning about auditioning. They're learning about the dance and the movement themselves. They're learning about the characters. They're learning everything. So if there were a curriculum for theater, they are getting it there. But there's not a checklist.

*The Children's Center doesn't say this is what you have to teach in the summer.* There's not a program, and that's the beauty of it. When I'm hiring a teacher, I get a really good sense of where they're coming from. I get a really good sense of their experience. I usually go out and meet them, or they are usually from a very strong referral. So I really get to know the teacher. But in that, I will say to them, we are doing a musical. I need a director for our musical. This is what I am looking for. Tell me how you work with kids. Tell me the things you think are important. But I don't give them a list of what they have to do. *For example, in the visual arts, what would you tell them you are looking for?* Well, the visual arts depend on the class. For example, we have a program called "Adventures in Art" that covers a whole gambit. It's almost like a mixed medium class. They learn painting, they learn mixing, they learn drawing, they learn monotone painting, they work with clay, and they work in sculpture. Basically, if I were hiring a new teacher, I would say these are the areas we would like to cover, but you are free to work into the curriculum things you are excited about. I think that is one of things I always tell people I want to hire is that it's real important to me that you're teaching from your passion. Not something that I am imposing on you because the best teaching happens when you're teaching from your passion. That's the beauty of the program here is that I say go for it. Even when I hire teachers who are going to partner up; I tell them this is what we would like to give the kids. For example, in our program "Multi-Arts" for our youngest kids, I usually hire a person in music and dance, someone who has that background and then someone who has the visual arts. And I say I would like them to have some type of integrated experience, but I would like you to talk with each other and come up with something you are excited about. *So it's not like you are saying this is what I want you to teach, you have an idea of the areas, the fields, but then they create the curriculum.* Yes. What I'm really looking for is that the students get an experience that excites them and that comes from the teacher

who is excited and passionate about what he or she is doing. *How long have you been the director?* I came aboard five years ago and worked with the director who was leaving, Joe Gray. He had been here for a long time. It was wonderful working with him because we came from the same place. So when the baton was passed, it was real easy and it was passed keeping in mind that we really wanted to keep going in the direction he had started. And it has been the philosophy all along that the kids come and get a really rich experience in the arts.

6. Please describe a typical day. What happens?

The kids are boarding and we also want it to be a fun "camp" type experience. But the emphasis isn't on simply going away to camp, camp meaning that you do horseback riding, or hiking. That happens after hours. From 9 am to approximately 3 pm or 3:30 pm or 4 pm they're in class. As I said, early in the summer, we have Children's Art Center, and that's ages 5 – 10. Their day ends at 3 pm. Later in the summer, we have the Junior Arts. Their day ends between 3:30 pm and 4 pm. Depending on how long their instructors want to keep them. A typical day will start with them getting up and doing chores, cleaning the dorms, cleaning the bathrooms. They go off and they have breakfast. Then they all go down to morning sing in Beaumont, a theater area where the whole camp gets together and does a group sing. Then the portions break off. Youth will go off to their camp, their classes, and all of the students at the Children's Center will come up to our center. Children's Center meaning Children's Junior Arts. Up at the Center there will be different classes going on, and they all go off to their own class. Right now we have "Multi-arts," for our youngest children 5 – 8. We have "Junior Writers" and they're doing writing and they're putting their writing into some type of printed form, by making books, printing them, whatever. We have another class, which is "Musical Theater." We have a "Shakespeare's World." They're putting on a Shakespeare production. We have photography, ceramics, painting, and drawing. They go off to their classes, all outdoor, covered, shaded studios. We have a snack break midway through the morning. Then they go to lunch for an hour and 15 minutes. They come back for their afternoon block of work from approximately 12:30 or 12:45 to 3:30 or 4 pm. And then there is a snack break. Almost like a school day, they're in classes. After that there is swimming until 5 pm and other activities. Dinner is in the evening. And there are also activities going on in the evening, different kinds of activities depending on the age. Sometimes it's a dance, sometimes it's a scavenger hunt, sometimes it's "Coffee House." Because the kids are all artists that come here, they will put on entertainment for each other. So it's that kind of an activity thing. The camp environment is after class, but the emphasis is on the arts. *Why do a group sing?* We want the kids to have a sense of community that they're belonging to a bigger picture, a whole. They're not just coming here to just do this, and that's all they do. We want them to get that feeling. It's a great way to start the day. *What kind of songs do they sing?* All kinds of camp songs, and because there are singers here, because there are musicians here, it may be songs that children haven't heard. But it's usually things that they can join in on. Another way we try to bring the day together is a sharing time at 3:00 that's where kids gather in the Children's Center from all of the different arts and they

share something they have done that day. We really want them to get a sense of what everyone is doing. And we also want to broaden their horizons. If they're here to do dance, give them a sense of the theater, give them a sense of what's happening in photography because they may end up wanting to try one of those classes at another time.

7. What theoretical models inform what you do in your planning or in your curriculum development?

We don't meet as a faculty and talk about a lot of theory. Our schedule doesn't permit it. I usually get a sense of the teachers in the hiring to hear where they are coming from. Now, I guess if we were working from anyone's influence it would be the big names that have really impacted education over the last 20 – 25 – 30 years. Longer ago than that, was John Dewey whose whole thing was experiential, very much influences how we teach. Piaget, Howard Gardner, the whole thing of the different ways of learning. Vygotsky, the whole thing of learning from experience and building your own knowledge. So I think there is a mish-mash of all of that, but we don't talk theory a lot. But by the very fact that there is very little rote learning that's going on. If they are memorizing anything, it's in the script. They have to go home and memorize their lines. But because of the nature of what we are learning, the arts, their essence, is experience. Even when we are teaching in public schools, and we're teaching English as a second language, one of the things that you will teach, you can teach through the arts very easily because you do not need the language. It's the total physical response. You do not need the symbolic language. Also when we are talking about problem solving, the arts are very much about problem solving. How would you do it this way? How would you do it that way? Can you do this? I'm going to give you this. What can you make out of it? Yesterday, there was a great example of experiential learning in that, in ceramics, there were two big tubs of clay, big trash cans full of clay that just been pumped again, mixed again. The instructor did a great thing. There was a huge table the kids were going to work on. He took two small trashcans and turned them upside down on the table and he broke the kids up into teams of 5. He said, "I want you build a bridge over the trashcan. The clay cannot touch the trashcan." So now you have 5 kids working together, trying to figure out what do I have to do so that this clay doesn't get too heavy and fall down. That was an example of this type of learning. It wasn't theory. They could use what they thought, but they really had to do it in the doing. And they learned then how plastic is clay, how heavy is clay, what do I need to do to make this work? *There is always this discussion about product versus process. How do you see that in your program? How is that balanced? Is it an issue?* There is an issue because, for example, in musical theater they're striving for a product. They want to put on a good show. They want to be proud of what they're doing. So it's not whatever happens is fine. In that program, they're really learning the discipline of learning their lines, learning their dances, listening to what their teachers are doing. They're also learning that it's ok to try something and totally fail. So there's a mix there. But yes, they're aiming for a good product because that's gonna be part of what makes that class a success for them, that they're proud of what they put on. With our younger students in "Multi-Arts" we're not aiming for product. By the

very nature of what they're doing and the fact that they have these most wonderful teachers that are giving them these wonderful experiences, they're going to end up with some beautiful products. But it's not like I want it to look like this. In the older class, in the painting and drawing class, they are going to end up with product, but they are also given much room to experiment. There's a balance between process and product within that one. There are exercises that they do that loosen them up, that give them the ability, the time and the space to experiment so all of that loosening up and experimenting can then go in to another piece of work that will become a finished product. But there is a balance in that class between knowing what are the colors on the color wheel, what are the complimentary colors, what will I do, how will I make the color bounce out, what two colors side by side will do that. Those kinds of things, they need to learn. And they can learn it several ways. The teacher can say look if I put this next to this look what happens. Or they can look at pieces they have done and say that color is bouncing out. Why is it bouncing out? What do you think has happened there? There are ways you can experiment about it. *It seems like when they are younger they are experiencing it more. Is there a time or an age you think that they might shift into balancing the product versus the process?* Probably as they get older, but you never want to lose that process part. That's so important in the arts. The playful part, the experimental part, the "I don't care what happens" part, is really important. But as they get older, when you go into a discipline... Art is a language; you have to learn that language. So it's learning the language so that you can express through it. If I want to express a very angry painting, I have to know what colors do that, what strokes do that. It's learning how to use that language. *In your personal philosophy, do believe one is better than the other?* No, they go together, they really go together. And even with the young ones. I have seen teachers that will hold up the product and say, "This is what we are going to do." Yes. Then we have 20 things that look the same, and that's not what art is about. *So what is art about?* I think art is a language that we learn. I think so many times in school, we are not learning that art is a language. It's not valued as a language. When I go into schools and I teach, I taught third graders last year art. Art is a language. We talked about what is art. And everybody thought art was drawing. What do you do with it? And finally they realized, "I can express emotions. I can make a statement through this." So art is about language, a very expressive language. Very simply put, it's probably the language of the soul. Children come alive when they can express through dance and music and painting and drawing and theater because it's really expressing what's inside, it's expressing what we feel. And that's the thing we are losing in education. When I go into a third grade classroom and we start doing art, the kids come alive right in front of my eyes. And the teachers see it. "My kids are changing." You know we'll talk about it. They say, "My kids are changing. They're taking risks that they've never taken before in other areas. Their writing is better. They want to read. Why?" It's because they've come alive. So that's kind of what happens here. You see the kids just have a way of doing that.

8. Have you worked in non-experiential settings? What kinds?

No. I don't know that I have ever worked in non-experiential settings. I don't know that any setting is completely non-experiential. Unless you are going to some kind of a college course where it is all lecture. Being an elementary school teacher, and by my nature and the way I teach, if it was more rote teaching, it never lasted very long in my classroom. So no. I really haven't, nor have I been asked to teach that way. *How many years did you teach in public school?* I taught for 30 years; some times in public schools, sometimes in private schools, back and forth. *What grade levels?* When I was in the regular classroom, I taught kindergarten. But I would go back and forth between teaching kindergarten or I'd be an art teacher. So I've taught art in elementary schools, and I've taught art in high school. *Do you have Fine Arts degree?* I don't have Fine Arts degree, but I have Bachelor's in art. So I think I have taught art to all ages I guess I could say, K through college, because I have done college courses for teachers in art. But in the regular traditional type classroom, I've been a kindergarten teacher. Early Childhood Education is my specialty and art. *So has your art degree affected how you taught?* Very much. I was taught by an amazing artist, her name was Sister Clarita, who was at Immaculate Heart College. She was a silkscreen artist. But she was an amazing art teacher in that she always had us doing things that were pushing the envelope. She had us painting with brooms one time. She had us go to a big, huge tire company that was two blocks long that sold tires. We had to be there for three hours and write down our observations. She was always pushing how we saw things and how we did things. *Where was Immaculate Heart College?* Immaculate Heart College was in Los Angeles, but it was one of the small colleges that went under several years ago. So it's now the American Film Institute, it's where AFI is right now. So to answer your question, I have never taught in a non-experiential setting.

9. How would you describe the difference between experiential learning and the more traditional forms of learning? *For example, are there different outcomes, processes, methodologies and/or skills?* Please explain and give some examples.

I am in public schools a lot now because of teaching art in different schools. And what I see in the public schools is a lot of rote learning. A lot of memorize the answer and give it back to me. It saddens me because kids aren't learning how to think. They're learning how to memorize. They're learning how to give their teacher the right answer. I think that is deadening to our souls too. We are creatures who like to experiment, who like to discover, who like to figure things out. So that's what I see in a lot of public schools. I think the difference is that in the settings where I see experiential learning there's a lot of joy in learning. There's a lot of room to make mistakes. There's a lot of room to try things out. There's a lot of room to construct your own set of knowledge. For those teachers who are influenced by Vygotsky, they will give their students room to try things out, to experiment, to make mistakes, and then construct their own knowledge. And that's what knowledge, that's what learning is about. That's what makes it exciting. And there are times when, yes, you need the "show me how do I do it," but what I see is a lot of kids sitting in their desks learning from

their heads up. There's no body in it. There's no trying things out. There's no experimenting. Very little. They even practice filling in the bubble. That's a sad state of affairs.

10. What do you consider to be the advantages of experiential learning in general and your experiential focus in particular?

I think that the advantages of experiential learning are that kids get the joy of discovery; they get the joy of trying things out. In experiential learning you're using so much more of you. It's not just your head. It's not only thinking. But you're trying things out. It might be through dance. It might be through movement. It might be through constructing with young kids in learning how to spell. What does it sound like? They're figuring it out, rather than being told how to spell a word. So, they're having to pay attention to words in a different way. I'm just using words as an example. But I think the advantage is that it uses so much more of who we are and we get to engage in the learning. We get to engage in the activity of learning. As opposed to trying to give back an answer, trying to memorize something, trying to look for the right answer.

11. In what ways do you think this form of learning could be incorporated into traditional settings?

I think it can be incorporated. I think that there are a lot of ways that are constricting learning. One of the ways is the space in which we learn. Many of the classrooms that I walk into are so small, that there's no room for moving about. The kids are in desks, or at tables that take up all of the room. That's one thing. So I think we have to look at our settings different. Can we get rid of some of the desks? Do they all have to be in desks at the same time? Can there be learning areas? Can there be open areas? So I think we have to look at the settings. And I think don't let the setting dictate how we teach. And I think if we ask more open-ended questions in our traditional settings. I think if we honored and rewarded trying and thinking itself, rather than the "right answer." When I taught kindergarten I'd asked questions, "Good thinking. What's another idea? What's another way to do it? Good thinking. That is great." If a problem arose, "How would you solve it?" I'd get 20 different ways of doing something in ways that I'd never thought of myself. So I think if we would reward open-ended thinking more than the right answer in the traditional setting. I think that we have to help the teachers know that it is okay. However there are a lot of teachers who know that it is okay but the money is coming from if they've got the dots filled in right. So they've got their hands tied too.

12. How would you describe the effects of experiential learning on the students you serve?

In this particular setting, they couldn't do what they do here at Idyllwild Arts without experiential learning. And I think the effects are, not only growth in the particular area, their particular concentration or discipline, but an overall feeling of achievement and "I was able to do it." An overall feeling of success is what I'm seeing across the board.

13. Do these effects occur in stage-like transitions or are they more unpredictable?

I think in this setting, with the little ones, we only have them for a week, with the other kids we have them for two weeks, so I don't know how to answer the question. In the end, overall they feel successful. They're so excited about doing their combinations, sharing what they've done. I almost don't know how to answer this question because of the setting. It's not like in a school year where you can see the growth over the year.

14. Do you receive feedback from teachers, parents, students, etc.? What kinds?

There is not a formal evaluation of our students. I constantly check in with teachers. They feel very free to give me feedback on kids. I go around to all the classes. I think I hit every class every day to see what's going on, how are you doing, checking in with students, checking in with teachers. We don't always get feedback from parents. We get if they're not happy. We always have students coming back and repeating classes. That's a pretty high percentage of kids that return. In terms of that kind of feedback, it's usually not real specific feedback like what did you learn in painting and drawing? But we'll get positive or negative feedback, but not real specific. We do have an official evaluation form for parents, but we don't always get very many of them back. It's a description of the overall program, everything from "Were you received well? How was the food?"

15. Does experiential learning work? How do you know?

Yes. I know because you see the results.

16. What tools do you use to evaluate or measure the results of experiential learning?

The only tool we're really using is observation here. We're not doing any kind of diagnostic stuff with pre-testing or post-testing. So it's all observational on the teachers' part. *So the arts program doesn't do anything where they track, like a quantitative study?* No (A) because our time with them is so limited and (B) because we don't know who is going to be returning the next year so we're not doing those kinds of follow-ups.

17. I am really interested in the transformative shifts that may occur. From your experience, are there examples of transformative shifts that come to mind? Are there factors that seem to be especially important?

I really can't say that it happens to all of them. We would hope that it happens to all of them, that there are shifts and growth. I would say that we see a lot of shifting and a lot of growing within kids. I've seen it in every class. We just finished a class called "Creative Writing and Spontaneous Painting." And in this class they had a morning class. Every morning was creative writing and every afternoon was painting. Now this particular class, there was no technical information given regarding painting. They went to an easel, and for two hours they worked on the same painting. They had to stay with that painting. The shifts we saw...are some of those students came because they loved painting, but they knew nothing about writing. Some kids came because they thought they



were writers and knew nothing about painting. And so the shifts we saw were just amazing because some kids came totally scared about writing and some came scared about painting. And no kids that age had ever been asked to sit for 2 hours at a painting. They left with such pride on the day of their culmination. They were so proud to present them to their parents and family. But we do see a lot of growth in the two weeks. There are kids in our musical theater who will be getting up singing and dancing in front of a huge crowd and that in itself, to be able to do that, will cause a shift in self esteem, a sense of their ability, their willingness to take risks. So we see a lot of change. We are going to see a lot of change every week in our "Multi-arts" class from kids that are shy, kids that don't want to try things, to kids that are out there having a great time. So, yeah. It happens across the board. And it happens in varying degrees. We had a young boy in our writing and painting class who was having such a hard time with it and he wanted to go home. He was a child who really, he may have had attention deficit, because it was very hard for him to sit still and focus. So we put him in another class the following week and he just shined. It had a creative dance component and a visual art component. He left so proud of himself. Now he may have left feeling badly with himself, if we had said, "Yeah, let's send him home." We really didn't want to send him home with that. We really wanted to see how we could make this work for him. So the shifts we saw with him... In fact I would walk across the yard and he would just come up and give me a hug. He wouldn't say a word; he'd just give me a hug. So those are the kinds of shifts we often see in kids. Just a general sense of feeling good about themselves and their ability. So in transformation, I think that's our biggest delight, their sense of pride and their sense of who they are, and being able to do it.

18. If schools were to be more experiential, what kind of training would teachers need?

I think they would need experiential training. I think when people experience the joy of that, you can't teach differently. I just think you need to experience it. You could have three days of telling them how wonderful it is and this is how you do it. But unless you experience it, you don't know it.

19. Where would this training most effectively be obtained? (For example, universities, workshops, etc.?)

I think this could be most effectively obtained at universities when you can go in and observe and see how teachers are teaching. Like at UCLA, when teachers come in to see how we are teaching kids, they get so excited. "I want to do that. How do I do it?" By seeing how it's done, seeing kids and the joy of learning that way. Also in workshops and in settings where you can experience it yourself. I think it needs to be done in workshops and in observation. To see it in action and to see that it does work with little ones and all ages. Some teachers say "I can do it with this age, but I can't do it with that." Yes, you can do it across the board. *Do you think there would have to be demonstration schools connected with universities?* It doesn't necessarily have to be connected with universities, I think if there were school settings that were doing it, it would be great actually to go in and see it. Because when you see it, it's like, "Oh, this does work!"

20. Is there anything else you would like me to know?  
No.

APPENDIX C  
INTERVIEW MEGHAN SHEARER, PROGRAM  
DEVELOPMENT, OBA, INC.

MEGHAN SHEARER, Program Development, OBA, Inc.

1. How do you define experiential learning in your program?

Experiential learning in our program is doing, taking the kids out to the woods and learning through the process of being outdoors and whatever comes out from that. So, experiential learning is the experience of the kids being outdoors and facing whatever situation comes up. So, then a lot of our experiential learning in our program is always based on five things, which is team building, careers, leave no trace wilderness principles, ecoliteracy, (doing some man-land connections) as well as a physical challenge. Through these five components is really the core of how OBA defines experiential education and how we execute those through our program. The physical challenge, the ecoliteracy, the leave no trace wilderness principles, the team building and leadership exercises and finally the exposure to outdoor careers. *And the leave no trace means?* Leave no trace wilderness principles is a national organization that established 8 principles in which all wilderness users should go by, to minimize the impact and maximize the experience. So the idea of a famous "leave no trace quote" is to "leave only footprints and take only pictures." So, how can we humans continue to go out into the wilderness and have the least amount of impact? So with the kids we challenge them to camp for a couple of days, and to have the least amount of impact, and we show them how to do this. *Then later on, do you have something that explains those 5 principles more in-depth?* The five parts of our program more in-depth? Not really. This is the thing that OBA is going through right now, that we are working on creating a really good program brochure. So, we can say, here's our program. We have been struggling with that for a long time now. But team building is any activity that brings a group together. The first thing we do on an OBA trip is when we get the kids all together for the first time, some of them might be from organizations where the kids don't know each other, we have already made contact with the kids three times by the time they get here, as well as talk to the parents. We get here and we do a name game, which is a team building exercise. OBA policy we can't say, "Hey, you!" or "Miss, Miss." You have to call people by their first name and if you don't know it, then you have to have the courage to ask them what their name is. So, you do a name game to make sure that everybody knows they know everyone's name which is a team building exercise in itself. Then we have basic, traditional team building exercises like Human Knot or certain little games where the kids work together to solve a problem. You set it up and there is no right answer. They figure it out themselves. And after each team building then we process it. What did you learn? What was hard? How was this different from another experience that you had? The physical challenge, every day we go out. Every time we go out we try to push these kids. These are inner city kids look like they are hardened and have faced some tough situations in their lives. Physically the kids aren't challenged anymore. LAUSD has the highest rates of obesity and some of the kids we get in here are not healthy at all. Their diets suck. Their exercise habits suck. So we get them out there and we push them on the physical challenge and a lot of the times it is really hard for the kids. So, we always have to do a little check in about positive and negative attitude and which one is going to get you up that mountain. So the physical challenge is

always incorporated in the basic hiking that we do. Leave no trace is brought in depending on how long the trip is. If it is just one day, we have lunch out there. Then we will make sure all the trash is picked up. We'll do a clean sweep and pick up other people's trash along the trail. Other principles include: always be courteous to other users on the trail, never break any tree branches or take anything. So, basic wilderness principles like this. Then when you go into overnights, you talk about how to make a campfire, so it doesn't look like you had one. How do you wash dishes with the minimum impact? Then, career's is a little tricky. We used to always have a component where a teacher, naturalist or forest ranger would come talk to the kids. And this is still done in some of our programs. But more so, of the five points that is usually the one that is sometimes not hit. But then through our program, beside our wilderness programs, we have work opportunities. So right now we have a contract with the U.S. Forest Service Crew and we have five African American Kids from continuation and high school that have really low job skills. We are putting them on this crew for the summer to hopefully train them for the next contract where they become crew leaders and bring up kids underneath them. So, this is the idea of career opportunities through OBA and other government and city contracts. And then, ecoliteracy is basic interpretation. So that, the kids, when they are out on a trail, they know the name of the mountain that they are on. They know the names of the trees around them. They can identify and call it by name. So, everything isn't tree, mountain, outdoors. That there's identification and there's recognition that things are different out here in comparison to other environments. So, this is how it is done out on the trail and through those five things this all is experiential education. It is really quite beautiful. And this is the way that Miss Williams set it up sixty years ago.

2. How would you describe the emphasis in your program? *(For example, is the focus on wilderness, arts, or science? Is the focus project based or emotional / psychologically based?)*

It's definitely a wilderness-based program. For the wilderness trips it's based upon the trip and the experience that comes up for them. It depends on who were dealing with, whether or not it is psychological, emotional, or strictly educational. Because I get kids out there that are first time offenders who might have gotten caught stealing a bottle of liquor when they're sixteen years old. They are brilliant kids who want to go to Cal State, Berkeley. And they're out there not for the team building and not for the interpretation. They're just kind of out there. They will pick up a little of the interpretation and the physical challenge is easy for them. So, this is more of a walk in the park for them. Some of my other clients that have come through here with kids are with foster care agencies. They're on tons of medication and it is quite psychological. I have dealt with girls trying to mutilate themselves and so forth on the trip. So it is a psychological trip for some people. And then others like this trip I just went on. It's quite emotional. Depending on what the trip is, and how we're designing it. They're breaking through boundaries and facing fears. *What trip was that that you just went on?* I just went on a nine-day trip up to Oregon. And so it was a car camping trip and we did a lot of stuff in the water such as white water rafting. There are a lot of fears that were being overcome through that process. And

because we are always processing it too. Sometimes we have work crews. Our work crew is an essential part. I have work crews that are project based. So we have 100 oak trees to plant for the City of Pasadena. We go out there and plant them, which is team building, career and ecoliteracy, but it is not emotional. Because we are not processing through issues. We are actually getting paid to do this work. So, that's a little bit different. *How were you trained to handle that? The emotional? And then how are you always processing it?* My requirement is that if somebody walks through the door they have already passed my test. Someone walks through and is wanting to work with the population of kids that we do and in the manner that we do it. You are more than welcome because we need trip staff. Qualifications will come on the trail. You just have to have willingness to one listen. That is how all our trips are set up, one leader, two counselors and six kids under each counselor. Any trip staff that comes on has to be willing to assume what the leader is saying and put it into action without question. You can process later with the trip staff. So, really it is following orders. We always say benevolent dictatorship is how it works because these kids really need a lot of structure. So the trip staffs are people who just have a willingness to work with the kids. Then of course you go over the five key areas. You go over basic policy and procedure of how it logistically flows. But when you're out there, the way that your trip staff relates to the kids is your own experiences. You can kind of watch it. It is something that can't be taught. It comes through the emotional connection that you make and the heart connection to the kid you are dealing with. And you can't say "Trip staff A with every kid this is how to handle it," because it is not. You just have to go out there and then you screw up. If someone comes on one trip and then says I want to work another one. Then they are a step closer to being on the inside. So we have no limits. We do finger print and background checks on our staff because we are working with kids here. But if you pass that, and you're willing to come out please come. Because there are not enough people who can do this kind of work. They think that they can do this work. They think that they can deal with these kids, but then you get them and their own issues come up. They are not ready to handle the kid's issues and they can't work the trip. So you have people who burn out quite easily in this organization. There are people who have worked for us for a long time and we are never going to talk to them again because they are just done working with kids we work with. *So, on a trip you have a leader, two counselors and six children per counselor. Are these primarily volunteer?* No it's paid. I call it a volunteer paid position because you get paid say \$50.00 as a counselor to go out. You work eleven or twelve hours that day. So we want to put a little jingle in the jeans. Miss Williams never paid her trip staff. They were volunteers. It was kind of rites of passage. It is not about the money. It is about the kids. You do it and you find your money somewhere else. Charles told me recently, Miss Williams said once you start paying it you are going to lose a lot. There are things that are going to fall apart in an organization once you start paying your staff. And he thought he should start paying. You get people in here wanting to know what are they going to get paid. Then you are weighing intentions. The performance is really "WOW" but then they do okay with the kids. But then you wonder are they being driven by the desire to work with the kids to get some change in their pocket? It's funny. *Do they pay leaders too?* Yes, a little more. About \$75.00. We have a cost

sheet that is out there that you can look at. Myself will go out. I don't do it for pay, on the weekends. I get paid enough to live here in LA, which is amazing. When I do any of these trips I don't want the money. I don't want the money! I just want to be out there with the kids. And some of the people don't want the pay. Some of the people that are employed here are not skilled laborers somewhere else. They come to OBA to get the job skills in order to become people in position like myself. A lot of my position came from the privileged background I came from. I always had people that believed in me. I always knew that I was going to get my PHD. I always knew that I was going to do this. I can come into a position in an organization and be here a year and already be in a position of power. Where there are kids in the organization that have been here for 7 years, but they lack basic skills that are life skills that you can only get if you come in to the office and meet deadlines and make to do lists. *How much staff would you have for the trip staff? Does it vary?* Every trip there is three trip staff and twelve kids. We always go out with those numbers. There is always one leader, two counselors and twelve kids. We will go out with a minimum of eight. We never go out with less staff than three. We never go out with more. There is no need to. But we have a lot of different trip staff on call. We have about fifty people on our roster. A lot of them are inactive. I work really closely with about ten people. *How is that different from the work crews?* Those are different because they are based on contracts with agencies like the City of Pasadena, or the U.S. Forest Service. So, the grant we just got from the U.S. Forest Service defines it in the partnership agreement, one-crew leader and five kids. If that is what it calls for, that is what we give them. I have worked crews where it's me and eight kids. When you're out there all you really need is one crew leader for eight kids. You can change it a little bit different because the reason you have it here so that there is enough staff that they can get to know those six kids in that group. There is the emotional connection. But on the work programs there is not a need. The relationship will blossom. But the need is to get the work done. And you don't need as many staff to interact with the kids with issues because you're just working. *How do you get those contracts?* One because of our long history and the organization. And because of the kids we work with. We are the organization that employs people of LA County. We don't do it a whole lot and we have the potential to do it a lot more. But low income, minority kids of color we can employ them. Right now, if you look at recreation statistics. It is like 2%. African Americans are the smallest percentage represented in the usage of the forest. So we get this crew. We get five African American kids out there. They are breaking boundaries and it serves a twofold purpose. The forest is ours. We pay tax dollars. One, getting them in the forest. Then you get forest visitors used to seeing people of color in the woods. Charles has told me some extraordinary stories because Miss Williams was taking them up to Oregon and to the Sierras back in the sixties when there was still a lot of racial tension. There's a lot of racial tension today let alone forty years ago. People were taken by seeing a group of people of color in the woods. It used to be that during the seventies and eighties they said that if you saw a black person up in the Sierras it was an OBAer. That it was somebody from this organization. We have a huge equipment room. Miss Williams would say take the stuff and go. So we get contracts with these granting agencies U.S. Forest Service, City of Pasadena, and others like the Mount Restoration Trust in

Santa Monica Mountains. Those are the three main ones that I can think of right now. Because people wanted to diversify the field. So they need to do it quickly and they don't have the connections. So they look to the first organization that has the tightest connections to the community of color and that is OBA. Because we have been doing it for forty-five years. Some of the first breakthroughs in outdoor environmental careers came from OBA. Like the first women firefighter, first Latino district ranger, all these kinds of firsts came from OBAers because they finally got the strength and broke the barrier. So, *when they work on the work crew, do they get paid?* They get \$8.50 an hour. That is not minimum wage. We are also integrating this. A couple of kids, on this particular work crew two of the kids are Bloods. We are constantly trying to do gang intervention. But my crew leader is a good crew leader but he is not good with emotion. He is a male who can't really process with the kids. So my biggest challenge is how I can get up to Mount Waterman to be able to process with these kids about their gang involvement. How we get contacts is ...what's happening right now is that there is a system failure all around in every youth development organization. They're saying they're still not getting it. Our services are still limited because we are still not doing it. What is good? "We say bring them out to the wilderness because that is what they need. Because if you look at E.O. Wilson (biophilia) what these kids really lack, especially urban kids is a connection to the environment. E. O. Wilson argues that it is innate to us as being human beings and without it we are depriving ourselves really of our soul. That is my own poetic reasoning for getting these kids out there. We pitch ourselves to organizations such as Sycamore, which is a foster care agency, Day One, a youth development organization and LA Bridges down in Watts, which is an after school, gang intervention program. So we work with other youth development organizations and because we have been around for forty-five years we have had these connections for a really long time. We offer these programs. OBA does it for little to nothing. We try to backfill with grant money and it is hard because we still try to provide services. We don't have a great grant-writing program yet. We do have some grants come through the door but that is a whole other issue. But the program is community networking. In OBA, Charles is an amazing person. He is from this area. He is from Pasadena, Altadena. He has a large family and they know people. It is all through word of mouth. People find out about OBA because we have been around for so long and they know Outward Bound. The Outward Bound wants to merge with OBA because they want what we have. In the higher levels of experiential education in the county they know Charles Thomas. They say no body does it in the black and brown communities like OBA. It is like a national standard. There are calls now that we go to state and Charles goes to national conferences. He's been asked to be on boards because nobody else is really doing this. Our name gets out there. People are talking about setting up different OBA's in different communities and serving low-income people of color. Experiential education has had such a white middle class face on it. So, *you contact different youth organizations or after school programs to get the students to come on the trips? Where does funding come from?* It depends on the agency. So, we dealt with Sycamore, which is a foster care agency, and they have tons of money. We will still give it to them at a reduced cost. This is Charles' reasoning. So they will come back for more. So we will run a trip. A



one-day trip. We charge them about \$700.00. But it normally costs about \$1500.00 if you really look at the time that is spent on it. It comes out to be about \$120.00 per kid per day. They put a call out to their social workers that provide a list of participants. We make phone calls to connect with the kids. Then they come for the one-day trip. The kids pay \$5.00. It's not a handout. The kids show their own investment. They give us five dollars for one day. The organization calls us and says they want to do a trip. We always try to do an orientation so that before they go, they can come meet the trip staff. So a connection starts between the trip staff and the kids. They know the theory behind it. Be prepared for this trip that you are going on. You find that once you have that orientation for two hours, that when you do the one or two day trip it is much more succinct than when the kids just come in the door because they think that they are running the show. And we're running it. *A ten day trip, how much would that cost approximately?* It depends on what were doing and because we work with people of low income. Like we just did this nine-day trip, the most someone paid was \$400.00 for a nine-day trip with four staff and twelve kids. One to four ratio. The thing is they can't pay more. This is where the kicker is. We know our quality of program is worth more and the value of life is worth more but the people can't pay it and so this is where my job position is really. Finally, I have found even since this nine-day trip that I went on; we're the magic of OBA. So now when I write it in proposal, you can capture it, so then people are like, "Oh my God, take these kids to the woods." The idea is to get large grants to run trips. We have a Gold Program. Ideally we will hook up with an organization that we've met through different community networking situations. They tell us what they do and we tell them what we do and hopefully it is a good match. Right now I am working on gathering \$120,000.00 for one year to take 5 different organizations on 5 different trips. They do two-one days, two- two days and a three-day trip so that you can build up the experience and build up the knowledge and service those five organizations, twelve kids each. *Do you have any idea where you want to take those trips?* On the day ones just go up to Angeles, Santa Monica Mountains and longer distance trips we can get up to Owens Valley and 3 day trip we could go up to the Sierras and spend two nights in the Sierras and come back. We always stay in California. We only do long distance trips in the summer. We do ten-day trips and we only do one ten-day trip per summer. In addition to Oregon and to the Pacific Northwest. Then we do like right now, we are going to the summer Sierras. This year we have three trips going to the Sierras for ten, six and five days. *In Oregon, did you go to campgrounds?* It wasn't a traditional OBA trip. We always have policy where you're in an area where you can't see any roads, can't hear any traffic. It's a low use. We would rather we be on the trail and nobody see anybody. But it is harder to get to those places because there are more people than in the 1960's. People are using the forest more than in the 1960's. It is harder to get to those back county places in one day or overnight. This long distance trip was maddening and how we planned it was we were trying to go through so much of the country that we couldn't get to these places so we stayed at state parks. We stayed at campgrounds. But we still did the OBA curriculum. We kept it OBA style. My only critique of that trip is that we should have stopped and gone to the woods for three days. So, I feel like I cheated my kids on that experience or rather set them up to have that experience. There is a magic that happens when

you put your house on your back and act like a turtle and go into the woods for a couple of days. So that is why these Sierra trips are really precious. They do three days of base camp and they go out for seven days. I will do it next year. This year they need me in the office to be able to run coordination. I did a one-day trip on Saturday, a week ago today and it was so fabulous. It was an amazing experience.

3. What population of students and age groups does your program serve?

You can see in our mission statement, it says kids that are at risk, urban youth, low-income at risk urban youth. We will serve anyone. Anybody. Rich, poor, black, white. But how much we charge might be a little different. We are set up to work with low income and people of color because that is how the organization started. *Is there an age range?* Yes, it starts at age eleven, the youngest, because we want the kids to be able to be away from their parents for a night and be able to carry a pack. So, eleven is the very youngest we will take. More so, twelve or up. We work mostly with like fourteen to eighteen year olds and then our work crew goes up to age twenty-five. So, we do that long development span of teenage years up to early adulthood.

4. Can you give me a brief description of how "experience" is integrated into your program? *(For example, are the activities guided? Are students given choice? Are the activities preset or do they evolve?)*

I think how it is integrated is that the wilderness trips are complete experience. It is not separated, so it is not integrated because it is experience. The activities that we do when we do team building are guided but like I said you set it up and then you let the process happen. You only step in as a leader when the kids aren't moving themselves. *What if they are disagreeing? Does the leader step in?* No. We let them handle it. What's going on? Later you process it because they can't disagree all day. But when you are in that processing circle after they complete their activity. Who assumed leadership? How or when did that conflict come up? Who determined? How is it when you have an idea of what you want and somebody else has a different idea? We talk about those kinds of things. It is all experiential based on there's no code. You say, "The team building activity that we're going to do is "Human Knot." So you set them up to do Human Knot. And then whatever happens happens. *The Human Knot is what?* The Human Knot is like you stand as close as you can, you put your arms and you grab two hands. You can always unknot yourselves. But everyone thinks you can't. You can. Based on what comes up in the conversation that the kids are having when the activity happening is based on how you process it. So if it is about it attitude, you talk about attitude. If it is about leadership, you talk about leadership. If it is about listening, you talk about listening. A leader has to be aware enough to notice what interaction is happening. What is the problem is arising as a group in this team building experience? Then be able to process it with them. So the student's are given choice the whole time. They can't not participate. If that is going to be your choice, well then I am sorry because you walked through this door this morning and that is your choice to participate in this program. So, you can't get out of not wanting to do the activity, unless they are psychologically screwed. Which has happened. There are kids whose lives are too messed up

to go through this. But there are kids who you know it is their attitude and they just need to do it. Or it's their fear and they just need to be involved. So, students are always given a choice. The set up is preset. They evolve depending on how the kids want it to. That is definitely with the team building and leadership. The physical challenges, like I said, you have the definite hike that you do. And then how you process the hike because you always have the kids in the back who aren't doing it. That comes down to how the trip staff processes it. Ecoliteracy is straight up. Interpretation and trying to get the kids involved. What is this? What does it look like to you? What do you think its uses are? Well it's this. *The tree or the plant*. You're doing whatever it is you're talking about. Leave no traces is very straightforward. There are certain things and how you apply them of course is interpretive and based on the experience of what was happening. *Do they do any rope type activities?* No. There's a period where they did some mountaineering stuff, with like rock climbing but insurance is too much for us to handle. And for these kids hiking is enough of a physical challenge for them. And the team building gets the same point across as the ropes course. And the fears are really done more in the facing the fears of processing. Not facing the physical fears of being able to walk on a tight rope thirty feet up but tell me what you feel. *Socially processed?* We have gone to places that do rope courses. We have often talked about how cool it would be to put some type of course in these high rafters in this building. But for the most part that is frill. Because you can do what these kids need, you can do it with a mountain, yourself and a child. You don't need anything extra because it is all here that needs to be processed. *It's all in the heart*.

5. Are these experiences based on some larger, more comprehensive curriculum or is the curriculum based on the experiences themselves? Please explain and give some examples.

This is in the process of what we are defining right now. The curriculum is really based on the experience, yes, but it fits into a larger curriculum that we are currently trying to really define. It is set up here, in the minds of the founders. The larger curriculum is that these kids are taught by skill so that they can be employed and that they can be real active participants in our society that also have a great fondness of the outdoors. And a great connection. So, this is our larger curriculum but it is not set up. But then we have these five things that are our curriculum that is based on the experiences and the path of each child as they walk in. *Originally, you talked about Helen Mary Williams and that she had done science outdoors. So is there any of that still going on, the science or are you moving away from that?* It's based on Ecoliteracy, so there is some science. When we go up to the Sierras we have map and compass reading that is going to be done, and some other basic science like mountaineering and orienteering. Like before they were doing water quality testing and soil surveys, which I am not ready to do with the kids. But if another leader steps in and says lets do it then they can do it. It is not my interest in designing the program. So the potential for the science curriculum to be there is there, but someone else is going to come in here and design it or the executive director because he has that in his background. I have a lot of chemistry and a lot of math. We have the Globe Program, which is Global Learning and Observation to Benefit the

Environment. We actually use the globe when we are up in the Sierras that are doing real life skills, species surveys and doing some counting. It hasn't been put in again. It kind of fell off. Like I said, the administrative staff is so new, which is also the program development staff. So in my own path of being here is just figuring out this part and how it all fits into the greater scheme. And now actually when can we get some of that in there. I think it would be fun to do more science. *But it is not tied to state standards?* No. He talks about how it would be nice to line that up but what I see the real push for or the real benefit for OBA isn't that education. It is the life skills education that these kids are missing out on. And that's what we have to offer. Cause that is where society is hurting right now. *The life skills, having the connection with the environment, and the love of it.* I found out on my first trip, which was an overnight trip up into a wilderness preserve. And this was when we were dealing with kids from Sycamore, heavy, lots of medications, experience with a girl trying to cut herself. I realized that my goal is to have these kids connect with the environment. This cannot happen unless the kids are connected to each other. This can't happen unless they are connected with themselves. So we have to start here, to get these kids to know themselves respect themselves, to love themselves, so that they have the courage to then love, respect, and honor the person next to them. So that they have the courage to love honor and respect this environment. Great! You know how to do soil samples. I want to take it down to the more basic human level. Some of these kid's dads are locked up in the prisons. Some of these parents beat them, and some of them are sexually molested. Like these kids are not getting it at home. And they are not getting it in their schools. They're not getting it from their social workers. If you can just give me a child for one day I will love him. That's all it's about. They're not getting it in other places. They're not taught to love. They're not taught to express. So then it gets boxed away and it leads to all sorts of societal problems. The Sycamore is a foster care agency. They are huge. They work all through San Bernardino and LA County. We service LA County. It not is on our mission because we go beyond it. But our principle target area is LA County. We work with a lot of kids from San Bernardino County and down to Orange County. We are starting to go down there, because kids are in need everywhere.

6. Please describe a typical day? What happens?

You start off your day by inviting all the kids here and doing the team building. You get all the paperwork. You do the name game and you get them to pack up the car. The idea is like you're just telling the kids. They need jobs. They need to do this, so they can get in the car. Before we leave, we try to do a map activity so that they know where we are, where we are going, tell us the routes that we are using and how much time it will take to get there. For a couple reasons, so they can go back there. They have a map and they are not nagging us the whole car ride. When are we going to get there? How are we getting there? Just look at your map. So we said it was going to be an hour and it has only been ten minutes. So then you get up to the site. We immediately do a team building. We get out of the car and get the kids moving again. Then we start on the hike. Also, in the morning you present a question of the day. So this is something like on Saturday with my one-day trip, the questions was "What do you want to

achieve in your life?" You get it now. I will remind you later. Tell me at the end of the day what your answer is. You have all day to think about it. So use this time out here today to think about what you want to achieve in your life. Everybody can do that. Yes. Okay. You do some interpretation stuff and then we go eat lunch. We do another team building activity or values clarification activity. It might be an activity on defining what clothes you wear and why do you wear these clothes. Different activities that define people's values and where they are coming from. The lunch is always done with leave no trace principles. This is a typical one-day trip. Then you hike back down the mountain. Then you come back to the office and maybe barbecue. And before we leave we circle up and do the question of the day. So then people are given the opportunity to use their own voice and speak about it. So through this day, on the trail, you are constantly trying to do as much interpretation based on how much you know. That is what it is important for trip staff to get out there and know the local environment in order to connect the kids. We used to always do a pre-test and post-test. But they seem silly to me. So I am currently trying to decide something that would really measure some sort of potential about what these kids are learning on our trips. So that's basically a set up. You do a name game in the morning, a team building at lunch and the question of the day. And if you can a values clarification. A question of the day in the beginning and then team building at lunch with ecoliteracy the whole way through. Then processing the question of the day at the end. On a longer trip, at dinner time you do thirty minutes of silence. You have those thirty minutes to be with yourself in nature. When you come back together after the silent time you do processing of the question of the day. The next day is the exact same. The only difference is on a one-day trip, you don't get that silent time. So, I usually make the last part of the trip silent hiking so the kids can finally begin listening. We realized together what these kids are missing is voice. So you do a question of the day. On Saturday during the Oregon trip I asked a question of the day. (i.e. what is it you want to achieve in your life? What is it you like in life? What is it you look forward to?) Kids in the ghetto, kids in the projects, kids in the streets, have two choices: I want to play sports and I want to be a rap star. In order to give these kids a voice, they need to know what their own voice is. So we try to integrate the written, reading and the spoken word because language, in the evolution of human beings, it's quite fascinating that we have the ability to communicate with spoken and written language and we can read other people's thoughts. So let's use this as a structure for kids to define their own voice. Of course, they're going to be uncomfortable writing, speaking and reading. Why is that though? It's because they're not given the opportunity. They need to be given an honest, open and trusting space that they can say whatever you wanted. You have to wake up to your own voice. So one of the components to this new theory that's being developed is the importance of granting voice to these kids because they're told not to do anything. They're told to shut up, listen and just do it. They're not told to express themselves and so they do express themselves differently and they do look for conformity, leadership and for a voice so they find it in a gang. I understand the tribal, survival dynamic of being a part of a gang but the end result and how negative and destructive it is isn't based on survival anymore. So how do we create safer communities where kids can feel like they're part of a gang but it's for the benefit of people? It's for the benefit of

themselves, and it's not us vs. them. It's for let's go out and learn, be passionate and change the world. *Do you have them writing on the trip?* You have to slowly integrate this. So what we're working on right now is we're designing a gang intervention program where we're working with people constantly. One day is great, two days is better, give me ten and the wilderness changes their life but they still need follow through, because the kids do break, they go through a thing but then there is nothing to support them again. So we're trying to figure it out. We can't save all the kids, but if we can start trying. So what we're looking at is creating a structure where we're working with a group of twenty-four kids for nine months. Then when they get out of the nine month period there is a set up for them to enter into school, enter into the work force, and enter into something so it's continuous. Through these nine months is when you start the journaling process. So at the end of it, we're doing performance pieces so then you incorporate the art, so the idea is you've gotten your voice so strong so now let's hear it. Let's let people pay and raise money for the organization. We're hoping to do this nine-month program this year as a pilot and let's do it again and again but it has to happen outside the system or within it with the help of the courts or the help of the community. The writing has to start a little so even on the nine-day trip you give the kids journals if they want to. But you do a little bit of the writing exercises for them. For the kids who don't want to write, you have to work with them and you say you speak and I'll write for you. The reading hasn't happened yet. These are all theoretical ideas that we're going to implement though this nine-month program. I would like to see more OBA trips in the day. But sometimes we're dealing with kids who you can't get up and read that day. So you have to build a relationship before they trust enough to be able to say, "I can't read?" You say it doesn't matter. You're not going to get there by not doing it. So let's recreate a new pattern for you. Charles told me the other day that he wasn't a writer, that he didn't want to write, speak or read when he came to OBA. Slowly when you do get the kids who are hanging around you to do a little bit of it. You build up that trust. Now he's the executive director. We're talking about writing a book together. He's speaking all the time and so it's that idea you have to give these kids a voice but you can't just say talk. You have to create a safe structure. OBA is different in that we try to stay connected to our kids. We try to set them up so that it's not just this great twenty-three day experience they had in the woods. It's now they've entered into the family. We try to create more lasting connections because there are ways that we could, working with a population really closely, like servicing twenty-four kids with a nine month program every year, it's easy to put them into schools and into positions in the community. But I don't think we're capable of doing it with three hundred. So you have to keep it small and pure. It's not about the big contracts where you don't have the follow through. *How is the ten-day structure different?* This is for the Sierras. The Sierras is always different. It's its own program. They go up to base camp, Golden Trout Wilderness, and spend three days at base camp. They learn to set up tents, pack their backpacks, how to do a stove and they learn basic essentials of how to camp. Then they get a basic curriculum. So there's people up there doing science, some are doing astronomy, mapping, compassing and then I'm going to do something with writing. Create a journal with them. So we'll do a couple of lessons and then they'll do a one-day hike to get used to the elevation. They're at 11,000 ft. and they're going to get sick.

They'll leave the next day to go up. When you're doing a wilderness trip where you're hiking seven, eight, ten miles a day. You wake up; break down camp, that's your team building. You get your breakfast done. You have two groups. One group is cooking. The other is breaking down. So you're always rotating duties between the two groups. Then you go on the trails and they do processing questions. But a lot of it is the experience of getting that kid up the mountain, getting them over Army Pass, getting them to stay strong. So you have big time gang bangers that are crying like this is the hardest thing I've done in my life. So there isn't a need for what's your question of the day. You can bring that in. We encourage them to come together at the end of the day to do processing. It really depends on where you are going because sometimes the environment that you're in is all the team building, all the ecoliteracy, and leave no trace. It defines itself. We always scout our trips before we go because when you get there you can say this is actually a really good place to talk about this. There is a basic kind of structure but there is so much room for creativity on how you want your trip to go out. Some people are very by the book and they're just out there to get the kids to know how to set up tents, know how to break them down. Where as I am trying to get them to be more on an emotional level with the kids. *Do they have the freedom to design it however they want? Do you give them a curriculum guide?* No. We have a guy from Cal Tech who is getting ready to publish an article and he wants to work with kids. We said, "Do an hour and half lesson on Astronomy." He's an astronomer. I'm not going to tell the guy how to do it. There are people from REI that are doing map and compassing. So you trust it over. The whole thing about running a good organization is being able to delineate. I don't need to come up with that because that's your job and I wouldn't be able to do it. So a lot of basic structure we ask our trip leaders to please follow this. If you don't then we'll try you again some other time but I want you to follow the structure. But how you teach and what you teach comes down to your own style and you can't teach style. *So they're actually teaching from their knowledge and their passion.*

Yes they're experts.

7. What theoretical models inform what you do in your planning or in your curriculum development?

Well, this is kind of what I was just saying. The theory that we're defining right now is that the first theory is that idea of the environment, the other and the self. Then in order to get that environment you have to have a community, in order to get the community, you have to have the self. So going between those three relationships. Then when we're doing gang involvement it actually goes personal, gang, community, environment or global. So this is the kind of OBA framework; working on those levels, breaking them down and building them up. Then the other is through the process of the reading, the writing and speaking on the emotional level. There is that intellectual part for when people are doing science lessons and there are basic skills. *Do you base any of your curriculum on Dewey, Piaget, Gardner or any other experiential theories or models?* We're creating our own. We just haven't put it out there but I think the theory of this is there is so much you could publish on it. We just haven't and I think that what

we have works. We haven't looked outside the box because we're dealing with such a different model because of the population of kids we're working with. So I think that some of these ways, the models that were done, often times were based on white, middle class kids. It's a totally different set of issues when you're dealing with this other population. People come in here and what's the first thing you see? Oh my God, there are people of color in the woods! That's what jumps out at them.

8. Have you worked in non-experiential settings? What kinds?

I was a waitress in a coffee shop and I worked in labs. My education always, when I'm dealing with the environment because of who I am and how I perceive the world and interact with it, it's always been experiential. So I can't approach it from any other angle. Anytime that I've had the opportunity to teach, which started when I was in Northern India, I started doing environmental education with Tibetan refugee kids. It was experiential from the beginning. That was in 2001, when I was in my last semester of undergrad. I went to India as a student of the program. Three years later I got to go back as staff with the program. I went back to the community where my passion for environmental education first started. I never thought about doing environmental education until I got there. They said we don't want you to...Like I wanted to go collect trash and look at man land relationships and how they were identified in the landscape. They said we don't need someone to do that. We need someone to teach our kids. So I said, I guess. I don't really want to but I will. As soon as I did I was hooked. This is really what I want to do. *What were you teaching them?* Just basic waste management. The biggest problem in Darvasala is people are just throwing stuff off the hillsides. It's just like basic things. What things should you buy? How do look at packaging? The three R's and little animal games. That's when it started and I came back here and immediately enrolled in the program with Dr. Stoner. *What was your undergrad major?* It was a self-designed track in environmental studies doing human ecology with the basis on Tibetan culture. *Where did you do your undergrad?* University of North Carolina at Asheville. So in the mountains of N. Carolina. It's a really small liberal arts school. I felt fortunate to participate in the Emery program in Northern India. The first year they offered the program was my last semester of college. It worked out perfectly that I was able to study abroad my last semester and get all these classes. I originally started in the pollution control track at undergrad because I had a lot of science and math. I originally went to school for physics, thinking I wanted to be on that verge where science and spirituality meet. I took my physics class and decided I would approach it from a different angle. Now, education hits my heart.

9. How would you describe the difference between experiential learning and the more traditional forms of learning? (For example, are there difference outcomes, processes, methodologies and/or skills?) Please explain and give some examples.

You know the answer to this and I can lay it out there. This idea of experiential and traditional, traditional how they approach the student is more of a machine than a spiritual being that is on a path. The traditional way is based on a very masculine form, a very patriarchal form of competition, of individualism and of



creating good workers for the work force for this capitalistic society that we live in. Where as experiential education looks at this person as a piece of the larger web of life and how they're not machines. They're human beings with feelings and emotions. It's not about individualism. It's about cooperation. It's not about competition. It's about community. So these are the two ways that I see the real difference in approaches. The outcomes are different because in one you're training somebody to be a good worker and in the other you're training them to be a good human being. It's possible to be both because when you train them to be a good human being you get this end result of being a good worker but when you teach somebody to be a cog in that machine they're not necessarily a good human being. The issues that they have are suppressed and they're not connected to the world. This breeds connection and connection is everything. You have to feel connected.

10. What do you consider to be the advantages of experiential learning in general and your experiential focus in particular?

Kick out George Bush and this No Child Left Behind. Politics has no place in education. I think eradication of national standards; eradication of state standards but with that there's a whole demise of the system. So I come from like an anarchist perspective. I think there has to be an acknowledgement of really what the purpose of education is for, back to those true methods and this on the very core of the intention of education has to be redefined for America in order for there to be an opportunity because the teachers want it. I never met a teacher that doesn't want to teach in the nontraditional way. Every book you look at says this is what the need is but what's wrong is back here when education started being ruled by the state, started being ruled by the corporations and when policies were pushed through and they designed curriculum, these were the intentions of business. It was business defined on commodities based on the extrapolation of resources from this earth and it wasn't based on human beings themselves. It was based on conformity. It was based on getting into a certain system, working a certain way, talking a certain way, the eradication of languages, the eradication of curriculum, and eradication of culture, of all of this. In order to get this. So I think we have to go back. Acknowledge how screwed up our founding fathers were. OK, I got what your theme was but we can't do that anymore because it's not sustainable. It's not lasting, these kids aren't producing results. Let's go back to the original theory, redefine that and keep science, bring science back in, bring the arts in, bring literature back in; bring all of it back in. Then also create opportunity that the kids have time to be kids. *How would you redefine the theory?* This is where it can't be a top down because the fundamental theory in which we're talking about, you have to go back here, you have to go back to yourself and so you start figuring out where is it you're coming from and your approaches and how can you create community. One of my goals in life, which is kind of being actualized through OBA is creating from outside the box, ways of educating that you believe are pure and real. Then slowly as it evolves in time and experience and all these kind of nice ingredients come into this then you can create a school and build a structure. How I think it's going to have to happen, and it is happening, little things will pop up. Then eventually this one system will fail. If

you've ever read any Trunian theory. It's this idea of this will fail and there is already a model to take over. Because we're coming to a breaking point because education is based on a lot of different things. If our economic structure fails there are going to have to be new models introduced at one point because every society goes through a shift of perspective, of world consciousness, of worldview. I really believe that we are in a shift of worldview and that there are some people that don't see it that way and there are some that definitely do. We're moving forward because this is sustainable, this is lasting. *We are looking at it from the perspective of how can we put it in the classroom now. You're right it is a larger problem.* You can't save the whole system. When you talk about the Buddhist perspective, there is a lower path; the Hinayana path is the path of the individual. Then the path of the Mahayana is the path for all beings. But you have to realize that the Mahayana is based on the Hinayana. So you can't start benefiting others until you benefit yourself. So you can't just say with the system, it's all got to change. No, you have to change. I have to change and then I'll create it and then I'll be in the capacity to do it like I won't be able to do it. I won't be able to save all the kids. My intention is to do it. Can I physically, mentally and emotionally? No. Can I change the one kid that walks in my office today? Give me a chance. I hope so. So you start it there. So what your challenge is, I think the challenge of all teachers, is one of strength, to be able to build up enough of a voice to be able to overthrow the system by being able to not be beaten down by it. So if you go into that classroom, and that classroom is yours and you teach creativity and you teach art and it's not getting the standards and you get challenged for it and you make noise about it. They may say you're out of the system. You can't teach here and you have to be willing to accept that. As a stand up and if all teachers know that your acting in a union of all. Because all we're doing is waiting for somebody else to move. We're just complaining about the system and complaining is exactly what my kids do and I got the problem. What is the solution? What are the choices? You can stay here or you can move or you die. So you might as well die courageously. You might as well challenge the system. I'm not going to enter politics but I hope to align myself. I mean this is an interdependent world, with people who are in positions of power. So that you do work on the local level, you do get chummy with your councilman, with your congressman, so that you all work. You can't work on all those levels but all your friends can. So that's how I think the process – the integration has to start with the reclaiming of the classroom. My classroom is the wilderness or this room or wherever I am. But it's hard to teach. I didn't go into traditional education because I knew I would flip out the day someone told me to do something.

11. In what ways do you think this form of learning could be incorporated into traditional settings?

The overall benefits of experiential education are that the kids actually come to know their own experiences and are becoming more of themselves, more away from what we talked before in those two modes of education. As far as our experiential focus in particular, a lot of it is just based on the structure, is that barrier of thinking you can't do something and then being able to do it. The power of overcoming obstacles and facing fears and overcoming negative

emotion is kind of the real. I think, our experiential focus in particular allows them to go through that process of overcoming obstacles and negative emotions.

12. How would you describe the effects of experiential learning on the students you serve?

I think part of it is, because we don't have a model like a standard measurement tool to say how are the kids changing. We're still working on that real measurable outcome. Other than getting the kids out there and getting them involved. I can't say it, other than on a real personal level of working with the kids especially on a long term trip and then seeing the breaking down and the building up that whole process of being with that child and supporting that child is the effects of experiential learning is that there is a relationship that actually happens between the trip staff and the students that they're serving. It's there for the rest of the time. *Would you say that there are effects on their self-esteem? It doesn't have to be documented quantitatively. What do you see as effects?* Increase of self-esteem, academic performance, interest in life, more of an encouragement of potential. So definitely a lot of self-development happens and a lot of that self esteem, as well as that connecting to other kids from other backgrounds and becoming to work more as a community. These are definite effects. *I know that most of the programs don't. They keep looking for that tool to evaluate.* Even our mission statement says it is to: provide nature based education promotes positive self-development, environmental responsibility, and how to do career exposure. So we want these kids leaving with that they developed within themselves their own positive self esteem, their own leadership ability, and apply that they have an environmental responsibility now that they have sensitivity to the environment. This becomes something they become responsible for and also they are knowledgeable about the potential that this experience can be lasting, that you can have career exposure for the rest of your life. You can actually get involved in jobs. So in our mission statement, those are the outcomes we look for.

13. Do these effects occur in stage-like transitions or are they more unpredictable?  
Unpredictable, depending on the youth.

14. Do you receive feedback from teachers, parents, students, etc?

Oh yeah. *What do they say?* That OBA was an incredible experience for these kids. You often hear that the kids come back and they want to go out again and that they really look forward to the experience and you also hear a lot that it's hard. Some of the kids say they push me too hard. I don't want to go back. So we say no, that's exactly why we want you back. The only negativity that we hear is that we physically challenge them too much which I don't believe is possible because they're still alive. Mostly, it's a lot of positive. But also we're not miracle workers so when you do a nine day trip and you get through to a kid and you put him back in the streets he's going to act out of his own habitual patterns again. There is also a responsibility that comes from the youth. You have to show initiative to be involved in this organization as well. We can't make you. But I can certainly say during those nine days that there is for any child a period of

change where you can see something as change. But the habitual patterns are so deep that they go back to that other stuff but a seed has been planted. That's what we hear from the parents.

15. Does experiential learning work? How do you know?

It occurs and I think it is positive. The outcomes are positive. It is an experience they did not have before. They have overcome obstacles. They're thinking and experiencing new things. So if work means exposure to new things, exposure to things about themselves that they didn't know before. Then yes experiential education works.

16. What tools do you use to evaluate or measure the results of experiential learning?

We're lacking a tool right now. It's based more on just we service this many kids. They come from this percentage of low income, this single parent family. So we do a lot of basic stuff but as far as real measurable outcomes we're still dying for something.

17. I am really interested in the transformative shifts that may occur. From your experience, are there examples of this that come to mind? Are there factors that seem to be especially important?

Individual transformation of the kids? Yes. Yes, I should email you the six page email to all my families when I got back from this Oregon trip based on the dialogue I had with a couple of the kids and what was overcome by it. It explains huge transformations that because they involve my own relationship with these kids in a particular way. They had other transformations that happened with other trip staff because we are all unique in our network of being together. But an amazing break down of character and of willingness to try new things and a willingness to face those fears all through knowing that they were in a safe and trusted space. That it was o.k. to do these things. *A lot of people don't want to talk about transformative in this. They might say growth or shift or change but I think there is. I think that is an area for more research.* I think it's perfect. Like I said you can transform in a moment. Then those habitual tendencies are so strong that unless you have a way to continue them and then it's not going to be there. But the seed is there. So the opportunity for it to grow is potentially there. So transformation happens but then I would never say this kid is changed for life. If you saw him before the trip and after he probably looks like the same kid. He probably acts the same way but I know because I saw it. Something changed on that trip but now it's deep again because it is personal. *In your experience, for something to stay permanent, that's something you don't know? If it were transformative, what would we need for it to be permanent in an experiential situation? Because I know what you're saying is that they go back to their habitual patterns and you may not know this. I'm just throwing that out.* It is permanent. Their transformation is permanent in that individual's experience. Is it observable at every moment after that transformative experience? No, because I think the development, and this is all Megan's own philosophy of life, that it's happening on such a deep part of the psyche and the deep part of the ego and the deep part where we really come to a sense of self and who we are.

That's not always on the surface. So is it permanent? Yes. Does it become very deep and very buried? Yes. How to continue to bring that to the surface, and continue to challenge that kid? That's where you have to have continual programming. You also have to have, it's like that saying, "It takes a village to raise a child." The community has to support it. All of a sudden it's ok to be vulnerable, it's ok to be scared, it's ok to not know the answer, it's ok to be willing to try it, to be in a space that you can. Life isn't always full of those kinds of rights of passage situations. You can create more rights of passage by taking the kids on more trips. You slowly, slowly have to come back to it and bring it out again and then let it go because you can't have overnight transformation. It's going to take a whole lifetime. Even when they've, you can say transformed, they're out of the gang, they're in school, they're working for the community, there is still a transformation that's still happening because new things are coming as they go still deeper into themselves and deeper away from what they thought into what they don't know and what they've become. So, I think what a challenge for, really the experiential education is, is being able to provide people or their kids or the people I work with tools, that once they leave the experience, they're still able to process. So, that they have their own toolbox. They're not depending on staff to be there because we can't be there all the time. But they're starting to then work it out. They know now how to deal with some of the issues that come up so they can start applying some of the techniques that we teach in OBA as far as with going through experience. How does that feel and going back to that emotional level? If you're weak, the kids are going to, in that one moment that one moment of indecisiveness it's like a crack in ice and it will bust open. Because if the kids see weak, you're no longer that person that they turn to. They break that down and there's that lack of trust. But besides being weak in making a decision, I'm talking about emotionally to be able to bear the pain of really working with these kids and also knowing it has nothing to do with you. It's not me. It's only that I'm the person that's in front of them and they're talking a bunch of shit. Like, "I fucking hate you." "I hate this fucking mountain." I know you don't really mean it but some people react to that because they have issues and no education would happen because it's still a battling of heads. So you have to, in order to educate especially from a spiritual perspective, this is kind of the training process, is that you have to allow the space for the trip staff to screw up so they get to practice. They slowly learn that it is about the kids. They have to be solid too. We have to work on ourselves as we work on the kids but we're always supporting each other. So you can't just say well you don't have the ability to do it. You can't lead the kids because you don't have your shit together. No, they come aboard. OBA is a place where you can do it, because there is no better place to figure out what your issues are except working with a kid that really has issues. Then it's really just gaining that strength so that you can give it out to the kids. This is where I think this is a really unique aspect of OBA program and experiential education. The intention is that you're really trying to service that kid. That social workers sometimes, and again because they're in the system, just like teachers, there is so much red tape, there is so much bureaucracy that they can't. They are so frustrated at work, that they can't service the kids. I notice when I'm frustrated about my work, I can't service the kids and then I have to think, it's about the kids. It's about the kids. That's my new mantra.

18. Finally, if schools were to be more experiential, what kind of training would teachers need?

I think the first part is that people really need to, it's coming out huge and there is a huge movement in self help and in spirituality and of all these twelve step programs. It's also manifested in the physical, like the diet world and diets and exercises. But what happens, and this is very easy for me to see being so close to the Tibetan culture and hearing it, even from teachers. We have a really a twisted way of looking at the world where, for some reason, the external is valued and has more of a price than the internal. So people spend their whole lives making sure their external body is ageless, tight, and beautiful. They go out there thinking this is what they're working on and not the inner. Now there's this change. It's been there all along but it goes against the media. We have to work on the personal because no matter how this is, it's coming from inside. The training is that the teachers have to, like I would love to do this, is the idea of really breaking it down so they can go through their own processing. I think that part of it is this idea of working with teachers, because while the system is what it is, I still think that there could be some processing and some curriculum that teachers could go through in order that they understand the basic theory of being on their own spiritual path and approaching it from a spiritual perspective and being in touch with their own emotions and own difficulties so they can be in touch with the kids. Really process through just the basics, like why does work suck and allow a safe space that we can come together over gratitude, over why it's great to teach. But then you go into why it sucks and then you go into how do we turn the negative into the positive and then go back to our work force recharged. I think teachers need a safe space where they can get together and really process it because it's amazing work that teachers do. But they also have to put up with an amazing amount of crap. There is nowhere to process that. You can't process that with your kids. People don't talk about religion. I have no problems with it. Being raised a Buddhist in the south is not the easiest thing to go through. How I look at it is people are afraid to say spirit. Well let's process this. Why are you afraid to say it? Because you can't talk about God. My definition of religion is one's relationship with Creator, with God. Spirituality is relationship with yourself and other people. We have to talk about our spiritual relationship to ourselves and to other people. We don't need to bring in God. We don't need to bring in Creator because that's going out here, when here is the problem. We need to create the language that creates a safe place that this is no longer threatening. We're not even questioning the existence or nonexistence of God. We are talking about the issues here between you and me. God or no God and I think with teachers, with all professions, there has to be recognition of the spirit. I've always said I have such tolerance for everything and I have question for those who don't believe in the spirit. I believe there is something beyond our senses, beyond our comprehension that drives us. Modern psychology is seeing this today. This thing we call our mind, they've looked in the brain and they can't find it. They've looked everywhere. A couple of thousand years ago my man Buddha was sitting there and had the same recognition two thousand years ago using his cognitive mind. Looking and trying to find it and he couldn't find it. Realizing there is that. It's present. There is a connection when you meet people that is beyond physical. It's a spiritual

connection. Kids have that. It's spiritual and when you eliminate that you eliminate the possibility of connectedness because people have to see their physical connectedness with their spiritual connectedness happening all the time. I was told by a woman once, it was an astrologer, and she said you should definitely be going into education and working with kids and working with their connectedness with the environment because one of the strength you have is you still see the world as a child does. You can still connect to it the way a child does where as adults have lost that. In order to identify with the kids, you have to have that. I still think I can get around some adults and make them childlike and it's ok but there is this idea of what an adult is and what a child is. But these things of spirituality, kind of break it down and using the language of spirituality really what that context is. It's everything. That's all education needs is a spirit. That's all politics needs is a spirit and a consciousness because that's what we're lacking. We're lacking accountability and we're lacking follow through because no one is being accountable for their actions because there are no consequences. How do we bring in accountability? By acknowledging that we are accountable, that we are somebody. There is a spirit here. *You bring that into the classroom. You just can't be there without your spirit. The same with children. It just comes up. Any teacher knows you deal with it at the time. It's there and it's part of them. That's the part that's totally not in the research. I found very little because they can't do quantitative studies on it. It's great to hear you say that part. I was hoping to get more of that out of this whole experiential learning process. Not like it isn't present but it isn't spoken about.* It's not spoken about. My field is spirituality in education. That is where I get all my theory and it's my own theory because it's not really out there. People are defining it now. But it is true with the kids. My intention is that is where I am coming from. That's where we go back to. If the teacher knows it you don't have to call it anything. It doesn't have to be conceptualized. The teachers have to be willing to know that it's a spiritual dimension in which we're dealing with these kids and it goes into the emotional and goes into the intellectual. It's really that consciousness, it's that meaning, and it's coming from that spiritual level of something. David Orr does "What is Education For?" and the first thing is that all education is environmental education. So whatever you're doing, it's about the environment. For me, all education should be spiritual education that's based on the environment, that's based on who you are. His book is called *Earth and Mind*. In that is one chapter called "What is Education For." He has six or ten principles that redefine education. Another one of his ideas is that you have to be what you teach because that's where the teaching comes in. When I ask people, "Who are your role models" especially people on a spiritual path. They recognize spirituality and are willing to talk about it. They say it's how I see people live their lives. That's when I know that they believe it.

19. Where would this training most effectively be obtained? (For example, universities, workshops, etc.?)

I think workshops because what happens in the university system is they're slaves to the same mentality as the public school systems because they're run by the state and you have to pay lots of money. It's a huge obligation to commit yourself to going to a university for a semester. But to commit yourself to go to a

one day workshop is easier. Then if you could create teacher-training workshops where these skills are really taught then I think that's a way. Then what would happen, in the way I've led workshops in the past, not with teachers, there is this woman, Johanna Macy who's this incredible deep ecologist who kind of redefined for me a lot of things about processing and also how to integrate spirituality without ever saying it. We're working on a level of humanity, of feeling and of emotion and that's a spiritual level. So I've been trained by her to lead workshops and you start with this idea of gratitude, of coming together and you go into this idea of despair and turning. What you create out of the workshop are networks of people. You've created a community of connection. You could do a workshop for teachers so these teachers have a safe space to talk about the issues and then you align them over these issues. You have action strategies for them to take to another year in their lives trying to achieve the goals that were set up during your workshop. I think this is really what should be done. *What is the woman's name?* Johanna Macy and she does deep ecology and her thing is despair work. People say they don't want to go into despair. We live a place where you don't want to acknowledge it. A lot of her theoretical background is about just acknowledging feelings. Now she goes into what's called her work. It's called the work that reconnects. It's done as whatever the intentions are of those who attend. She travels the world. She has an incredible life story. *What's the name of her books?* One is called *The Work that Reconnects*. Another is called *Widening Circles*. It's her memoir. That's who I've been trained by and a lot of her theory is supported through her understanding of Buddhism. It really empowered her to see the world a different way and so that's my spiritual path. That's how I really connect everything back to my appreciation of life and my appreciation of this earth is through my spiritual beliefs. She had those same influences. When I first read her I had to put the book down and I thought oh my god because I thought I was the only person that ever felt this way. Now I realize there are other people who feel this way. She was born before my time and she is thinking what I am thinking. In my master's education, I attended a few of her workshops and she became my mentor. She really inspired me on that theoretical, conceptual level to give me the tools to go out there and do my work. She inspired me to implement some of that theory into this program. You have to have role models, you have to have mentors.

20. Is there anything else you would like me to know?

#### History & Background

This organization is about forty-five years old. It started in 1960 with the founder Helen Mary Williams and a couple of other teachers. She was actually an elementary school teacher at the Jackie Robinson Center and saw in 1960, mind you nine years before any legislation or an environmental act, the benefit of inner city kids going to wilderness. It started out as the Junior Audubon Society. She started taking little brown and black kids to the woods to start a summer Sierra program, and fourteen-day back packing trips. The program originally started at this time because it was the first one that did it. It had become a hot spot. The United States Forest Service saw what was going on



and we got lots of state and federal funding in order to do this as gang intervention programs. OBA was the first organization to go into Watts after the 1963 riots and recognize these kids could actually benefit from going out into the wilderness. Because the idea is to take away all the commotion, of the city and take them out there into the wilderness to really break it down, and they break it down themselves. It is obvious. Let the group processing begin. But it was especially in the beginning, very much based on the science curriculum that these kids could go up there and be educated and learn. With the idea of training them and creating work programs for them through the U.S. Forest Service and other contract agencies. These kids got the experience to go on and have environmental careers. So, our executive director, for example, was in the first sweep of picking up kids that were likely to be in gang activity. He had just gotten out of Juvenile Hall, was just back in the streets. He was swept up by Miss Williams and she was on him like a fly and just kept him in the program. Eventually, he went on to rise up through the rankings, the idea too, is that we train the people who are in our program, who love the program, to be the future leaders in the program. So, he went through the ranks as junior counselor, counselor, senior counselor, junior leader, leader, senior leader and he went on to obtain two undergraduate degrees, and his masters degree. He worked for the U.S. Forest Service, worked for the army corp. of engineers, worked for City of Pasadena..... And about eight years ago, Miss Williams who is still running the organization herself. She is losing the strength to run the organization. So Charles steps in as executive director. *Did she stop teaching at that point to run this organization?* Yes, she eventually stopped teaching to run the organization full time. She loved working it. She wouldn't let anyone else have it. Which in a way is great and in another way is damaging. She finally stepped back and trusted it to Charles. *She would be interesting to interview.* Oh, yeah. Oh, Yeah. *Is she still alive?* She is alive and how we often say that, because so much of the history of OBA is in the elders, and we're facing a time that we could easily lose them at any time now. We need to act on that so we don't miss those stories. We can actually collect them. So, she is actually a little lady. She used to stand probably 5'6" and she's about 5 feet tall now or shorter. She is really little. So, that is how the program started. And then it has gone through different changes of staff. So, I just got into a position. We just hired office an administrator a year ago. Charles has been here for awhile. But still every time he gets new staff we are working on new things. So, since I have come on in August, we have been developing new programs. It is a little different from the program in the past because I am going away from the hard-core sciences; because I think where the problem is right now is in the system. Schools are teaching so much of that and they are not teaching life skills that kids really need. So, now the wilderness programs are doing more of it. Also, it is my personal pursuit in life, more about teaching life skills and these kinds of things in our programs. *Is there anything else?*

I think what's really important is looking at what I was talking about before about how education came in. It's all been about quantity from the beginning. Experiential education is really new and how it's started at its roots from the people who did it. For the first time they just took kids to the woods. People questioned this as being valid because we're not counselors, we're not

psychotherapists. We're just people who love the woods and we are willing to go out there and process with these kids whatever comes up. There's an amazing magic that happens. So, there's been a stir kind in the work, in different communities about who needs this education. Traditionally when I came in, it was white, middle class kids that were going off the beaten path. In Experiential Education the founding principles are still true today. It doesn't have to be in the wilderness. It can be in the classroom. You can do experiential education without going anywhere. It's just your approach and your intentions and the teaching style and what you're really trying to accomplish. Hopefully, we'll live in a day where all schools will have an experiential component because it's essential that these kids learn how to feel and how to verbalize what they feel and all of this. You also train them for basic job skills. People are closed off particularly in L.A. One of my kids was on a nine-day trip. He was going through some stuff. He's a want-a-be gangster. He was talking mad talk all the time. Finally, I asked him to spend his quiet time with me. "Danny, what do you think the difference is between you and I?" How do you think you and I see the world differently? He said, "I bet you are somebody who says Hi to people when you're walking down the street." "You are exactly right, I said." "I would never do that." I asked why. They need to get the respect first. This is a closed up thing. I'm like, "open yourself up." It's really a matter of teaching people to be willing to trust and be open. You want to teach them to be safe and take precautions so no one takes advantages of them. I feel so thankful to have stumbled into this career and that OBA had a position and that I've come into this organization because I think it's rare. There's not a moment of my day that I think everybody has a job like this or that everybody is doing this. It's a place of passion and a place of what you make of it. It's really rare what's happening here and it's also, like anything that's really precious. It's always on the verge of being lost, lost to funding sources, and lost to documentation. You realize that this is a really fragile thing that we're doing here. You get into positions of leadership where there are very few people that can do it the way it needs to be done. It's almost like an initiation process. The only way to learn at OBA is to be here so that hopefully when Charles retires someone who has been around can step up. We're still looking for the next leaders. We're in the process right now of trying to create it, so I can say here's OBA. There's only so much you can put down on paper and all of the rest is up here. So kind of how we teach and how we set up and, hopefully, there is the proper student to come into it. It's almost like, I see it because of my own spiritual connection to Buddhism with the lineage, there is one person who knows the teachings and the teachings are only as good as the student they can find to pass them on to. It's an oral tradition and it's a tradition of experience, of being with that teacher. There's nothing like being with a good teacher. If you ever had a mentor like being with Crowell. You can't get that by reading his book. You have to be there but you also need the book. You need the teachings and you need your own practice. I think what OBA has is a really interesting system because we're kind of always looking for that. There's a preciousness of what's happening and there's always a threat of it being lost like OBA's doors can close in any year and never open because we lost funding. Does that mean the people here still won't be dreaming and wanting to help children in this way and find a way to do it? I think the passion is so strong that

I'll live in a cardboard box and do what I need to do to teach the kids. But it is a really rare and precious opportunity to be at OBA.

APPENDIX D

INTERVIEW BRIAN WINDROP, DIRECTOR OF ASTROCAMP

BRIAN WINDROPE, Director of Astrocamp

1. How do you define experiential learning in your program?

Guided Discoveries has a belief that kids should have opportunities to discover things. And discovery means that you have an opportunity to make mistakes and an opportunity to do things essentially. It's a huge question we could talk about for hours. At Astrocamp what it means is that kids are doing things that are hands on. They're actually manipulating things, there's no books. A kid at Astrocamp never, once opens a book or writes anything down that we require them to write down. Nothing at all. It's all experiential in the sense that they are all touching it, building it, creating it, and physically doing it. So they build rockets, they launch rockets. They build Mars Landers out of balloons and things and drop them and see if they live. They get into the pool and do micro-gravity. It's kinesthetic, it's not using just writing skills or memorization or any of that stuff.

2. How would you describe the emphasis in your program? *(For example, is the focus on wilderness, art or science? Is the focus project based or emotional/psychologically based?)*

At the education facility, we do Astronomy and Physics. That is absolutely what our focus is. We do absolutely no wilderness arts or outdoor education. No one comes here for anything else. They learn about astronomy, physics, and light in a curriculum sense. And we also do a lot of work, like any place like this. We do a lot of work on team building, communication skills, problem solving and so on, self-esteem, challenge. The actual focus is 90 or 80 percent, black and white distinction. There are blocks of time at Astrocamp where the kids are exclusively doing teamwork; blowing things up, learning about atmosphere and gases.

3. What population of students and age groups does your program serve?

8 to 12<sup>th</sup> grade; we get very few high school groups. But the vast majority of our kids are 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup>. And even more finely tuned than that, a huge percentage of our kids are 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> graders. 60: 40 public. The majority is public. It's \$155 per student that covers everything for three days, not including bus costs. \$310 for the five day. As far as outdoor education, this is an inexpensive facility. Most places charge 20% - 30% more easily.

4. Can you give me a brief description of how "experience" is integrated into your program? *(For example, are the activities guided? Are students given choice? Are activities preset or do they evolve?)*

Guided Discoveries is the name of our organization. The whole premise of the organization is included in the name of the organization. The premise of course is discovery, but it is guided by our teachers. We have the kids build these little Mars Landers, where they take balloons and tape and Popsicle sticks and that sort of stuff and they land it on to this fake Mars surface and see if it lives. So it's guided. We tell them the materials they have access to. They have a budget that they have to buy materials with. It's guided, but they have total control over what they build. It's completely inquiry as far as that goes. In that there is

nothing prescribed about what they are going to build, or even how they are going to build it per say. Some classes we have are very student driven and very open ended in what happens. Other classes are more demonstration based from our staff. The kids are never reading or taking notes, but some things are too dangerous to have the kids do. Teachers do all sorts of work before they get to Astrocamp to prepare the kids. And then when they leave, the teachers, in almost all cases, tell us that they debrief the trip academically back in school. We give out notebooks that include places to take notes on all of their classes and so on. A lot of the teachers have the kids do that back at the dorms. But we don't want to take that time in class because it's not experiential. It's iteration. *So the teachers come with their students?* Yes. Every school provides supervision. Usually that's teachers with parents; sometimes it's only teachers, sometimes it's only parents. They come Monday, Wednesday or Friday; come Monday leave Wednesday, come Wednesday leave Friday, come Friday leave Sunday. Or they come Monday leave Friday for a five-day trip. There's no variability. You can't do a one-day, you can't do a two-day, and you can't do a four-day. Our whole system is set up to be able to accommodate kids in that sort of structure and routine. Our goal is to have all of our classes maximize the amount of student driven experiences in them. That's our ambition. So we are always trying to achieve that. It's sort of didactic where we're telling the kids what is going on and trying to have them experiment and so on. *So how do you evaluate that every year to know that's going on?* Back in the day where kids sat for twenty minutes and now the class, the kids sit for ten minutes because they're building things. It's informal.

5. Are these experiences based on some larger, more comprehensive curriculum or are the curriculum based on the experience themselves? Please explain and give some examples.

I would say that there isn't a larger, more comprehensive curriculum. That's the easy answer; it's not entirely accurate. But it's true. We have curriculum guides for the classes that we use to train our staff with. So if we hire someone who's a biology major who doesn't know anything about the electromagnetic spectrum, we can teach them about that. It's a curriculum guide for staff. None of our classes are so narrowly prescribed that someone needs to follow a script. There's nothing like that. There's an enormous amount of teacher discretion in what gets taught. *Do you try to tie into the state standards?* Informally. I have that background so I can speak about that with principals or lead teachers that come, but we don't formally do it. In fact, I'd like us to, but we don't, we haven't yet.

The name of our organization, the umbrella organization is Guided Discoveries. Astrocamp is a part of Guided Discoveries. In the same way General Motors the car company also makes Chevy and Pontiac... Guided Discoveries runs the Catalina Island Marine Institute, and the Tall Ship Program run on the big ship, the Tole Mour. Those are sister operations.

Ross Turner, who founded this company back in 1977, always loved astronomy as a kid. So he wanted to start a school that focused on astronomy. Catalina focuses on marine biology. He was a classroom teacher. He knew that the

schools do a horrible job in teaching the physical sciences. They just don't. So he said, let's start a place that does Physics and Astronomy. He thought it was a good business idea. He realized it was a good academic idea. This facility started in 1989 – 1990. He came in and they just took the Guided Discoveries Model and started creating classes on these different physical science topics where these kids were building things, blowing things up. Seeing physical science and not reading it out of a book and reading about Isaac Newton. *Who came up with the Guided Discoveries Model?* Ross and Christie started the company; it's their child.

6. Please describe a typical day. What happens?

A typical day at Astrocamp begins with the students getting up out of their dorm rooms, going into the dining hall, getting breakfast, and at 9 am their first class starts. All of the classes are an hour and a half long. The first class goes from 9 am to 10:30 am. They get a fifteen-minute break. They go to their next class at 10:45 am to 12:15 pm. They go to lunch at 12:30. They get some break time after lunch. Their third class of the day, the first afternoon class starts at 2:15 pm to 3:45 pm. They get a fifteen-minute break. 4:00 pm to 5:30 pm is their fourth class. 5:30 they get a little break. They go to dinner at 6 pm. The evening program starts at about 7:30. They do telescopes; they do a night hike. Telescopes being our premier program. They do other sorts of things that will go until 9 pm. Then they go back to the dorms, go to bed. At any one time, we might have 200 kids here and 15 different classes going on. It's quite an orchestration. That's the schedule everyone follows. Whether your particular son or daughter might be in this class or that class is completely dependent upon what your school requested and what the details of their schedule are. Some classes are entirely inside, some are entirely outside, and some are both. Most of our classes involve an outside component. Even our classes that are inside the whole time, they are not sitting at a desk reading books. They're doing something. The nature of the class could be a very equipment intensive class, like our lights and laser class, where all the stuff is very lasers and so on, very indoor stuff. When Ross and Christie started the company, he had a gut level understanding that doing things outside experientially was better than what he did with his kids inside the classroom. He wasn't a PhD in Education. He's a very smart man. He had done his credential. But he wasn't, especially when the company started back in the early seventies, this was a nascent idea, there wasn't a lot of research, any more than there is now. So it was only his own intuition and sort of intelligence and so on that did this. Because of my background and my Masters in Education, and having done experiential education, before I did my Masters, I focused on that. So, I have a sense of the literature and some of the research, not a lot of it, I'm not completely conversant in it, but enough of it to have a sense of what the underpinnings are of what we do. Which is why I really like the 2061 Science Project, and the science benchmarks and the NSTF. I like National Science Standards because it is easy to find references to inquiry and to experiential sorts of learning even at those high-level type documents. What Astrocamp does is completely unique. No one in the country does residential astronomy and physics education. It's all outdoor education. Environmental Education is a dime a dozen. And there is great work

that happens in that. And quite honestly, there is some really poor work that happens under the name of Environmental Education. Astrocamp is unique. In Environmental Education, there is a lot of literature on the philosophy of it, the approaches to it. NAAEE is the North American Association of Environmental Education. It's the whys, and wherefores, and hows of doing Environmental Education research-wise. There are lots of people out there doing that work. *What would you say your personal philosophy is?* In 1991 I graduated from "Go Bears" and I got a job at Yosemite Institute. I'm only 36 years old, but for my entire professional life, I have done environmental education. My philosophy and approach to it is very well formulated in my mind because I have done it for a long time. And I'm the sort of person who thinks a lot about it. I'm leaving here to be the Executive Director of environmental education organization in Oregon. My personal belief is that having the opportunity for a meaningful connection with the natural world, can cause people not only to have a connection with that place, but certainly with yourself, that is transformative, that is profound beyond the realms of the intellect. For a kid like me who grew up in a rough neighborhood in L.A., with gangs and violence and bad schools, the whole nine yards, my getting out of L.A., what little my family did, to come to Idyllwild, changed my life. *To live?* No. We came to camp for a week and went back. Buckthorn, a church camp. It wasn't science; there was nothing formal about it. I spent all day catching lizards and climbing trees. I've taught thousands of kids. And when you teach your kids in a national park like Yosemite...It's like the proverbial one of the teacher in the classroom who gets the kid to understand that  $2 + 2 = 4$ ; I mean bigger light bulbs than that. It sounds hokey; it sounds fuzzy wuzzy, but it's not. It's my experience and if I were to pursue a PhD, I would document this because it's absolutely what happens. Kids form an intellectual and emotional connection to the world, the planet that we live on, which, when informed by science, it's not just emotional. It's an understanding of life cycles, an understanding of mineral cycles, and water cycles, and their connection to the planet, and food cycles, and where do we get our food...All of these things give context to kids they don't get from watching television, or watching cars on a freeway. So my philosophy comes from that deeply held conviction, and belief, and understanding that that's good for people. Not everyone is going to grow to be a biologist. Fine. Not everyone is going to even be able to articulate that this was a significant thing to them. But enough people do that it's clear to me that it has a wide spread benefit. So that's my belief in doing outdoor education. But that doesn't say anything about how to do that. And my belief in how to do that is providing an atmosphere for kids that is as safe as humanly possible emotionally and intellectually for them. The whole system of public education and structured education is filled with things that are absolutely counterproductive to kids' learning, kids' self esteem, being confident, being excited about life. When you get a kid at Astrocamp, or in another high quality environmental education program, the first thing that instructor has to do...You have to have small groups, not fifty kids, not thirty kids. Really not even twenty-five kids. In my experience, if you have more, ten is ideal, if you have any more than fourteen, fifteen; you are up against the wall. You can't develop the one on one relationship, meaningfully that you need to have. And you can't facilitate group processes the way you need to do it with groups that large. So there are a lot of structural things that go into this as well.



But you get these kids and you spend a serious amount of time, it could be half an hour depending on the group, and get them to a place where they realize this place, where they're at, is not where they're from. That different opportunities exist here, different boundaries exist here, you can be a different person, you don't have to be Billy Joe at school who is the bully at school. You can be Billy Joe who is actually a very nice, helpful person. And so the teacher facilitates that by having discussions with the kids. This isn't accidental. It's very consciously, purposely, carefully planned to do certain activities that lead to teamwork, or that lead to problem solving where no one can be the leader. It requires everyone to work cooperatively. That you explicitly talk to kids about what it means to be successful in a learning environment. What does it take? Respect and all sorts of stuff, it's not just words. You then reinforce that with activities. So the whole focus in education is really subversive in many ways to what society does and to what the public school system is attempting to do. The science content is only the vehicle; it's not the purpose. We need engineers, we need artists, we need politicians; we need everybody we have. The purpose of education to me, after you have facilitated this initial process, is to get kids excited about learning. It's not about whether they remember the name of the tree that I'll teach them. They may not remember that, I don't take that personally. It's that it's fun to learn. You can learn. It's fun to learn. These are ways you might learn better than you do in school. Isn't it nice to run around and be physically active instead of being confined to a chair? The end result of all of that, if it's done well, is that kids had an amazing time. They absolutely loved it. They're inspired. And the outcome of that, being a serious educator, is that kids go back to school.... In many cases, I've had so many letters that talk about this, and the research Barbara Schneider did, they have a higher level of performance in their classroom because they have more confidence, because they have more interest in learning. They may not like school still, school still has all the drawbacks of school, but it has transferred back into the classroom. And for a lot of kids it sparks in them, a connection to something they really need. When you are doing research in this sort of thing, when kids go to the Marine Institute on Catalina, kids will grow up to be marine biologists and it changed their life. Now they work for the Monterey Bay Aquarium and they have PhD's from Scripps and that may not have happened if they had not gone. We are no doubt affecting kids who have somewhat of an interest in the physical sciences to realize, wow, this is cool. It's not cool at school. School sucks. But this sort of stuff, which is closer to what researchers actually do, is very interesting to them. At Environmental Education sites, we would get that sort of feedback years down the road from groups who had gone there as well. The real purpose is to get kids excited about learning. When I was teaching 7<sup>th</sup> grade in high school, it was heartbreaking to me. I had five classes of thirty-five kids, forty-five minutes of class. I was lucky to know their name. You couldn't even begin to start to do the things that needed to be done with these kids. Talk about slipping through the cracks. I cared with all my heart. All of the paradigms are true. You end up teaching to the kids who are most troubled, or you end up catering, because you are burned out, to the kids who are nice, successful kids, so to speak. By doing this sort of work, the maximum group size at Astrocamp is fifteen. Often our group sizes are twelve and thirteen.

7. What theoretical models inform what you do in your planning or in your curriculum development?

I believe I answered that.

8. Have you worked in non-experiential settings? What kinds?

Non-experiential, yes. While doing my Masters degree, I had so much previous teaching experience, I did an internship. I taught 10<sup>th</sup> grade honors biology and I taught a 9<sup>th</sup> through 12<sup>th</sup> grade general science class for all the kids who were essentially about to get kicked out of school. I taught a year of 7<sup>th</sup> grade science in public school. I ran a writing center for a year.

9. How would you describe the difference between experiential learning and the more traditional forms of learning? *(For example, are there different outcomes, processes, methodologies and/or skills?)*

The differences between experiential learning and classroom learning are so many and so significant. If you're not a good student, if you're an average student and especially if you're a struggling student there can be outright fear and loathing put into them. The significant difference is that it is against human biology to ask a student between the ages of five and thirty to sit in a desk for eight hours a day. It is unhealthy, it is inappropriate, it doesn't work very well. What time in human history have we asked kids to sit for eight hours a day? It's their most physically energetic time of life. The bureaucracy of the education system is based on quantifying student performance on very narrow measures. The outcome of a high quality experiential education program is a measure of student engagement; it is a measure of student interest. The outcome is not only understanding whatever it is you've been teaching about, ...The primary desired outcome is that Susie and Johnny are excited to learn. Susie and Johnny get along better. Susie and Johnny have a different conception of themselves. They don't have to be the kid that they thought they were because they have other skills. It's hard to report to the government the effects of what we're doing at Astrocamp. But it's obvious to anyone who is here, teachers, parents, us, what's happening.

10. What do you consider to be the advantages of experiential learning in general and your experiential focus in particular?

I believe I answered that earlier.

11. In what ways do you think this form of learning could be incorporated into traditional settings?

If I had a magic wand, and do one thing for every teacher in America, as ridiculous as this may sound, I would cap every class size in the country, regardless of age, regardless of subject, regardless of everything, no more than twenty. Preferably fifteen to twenty and no class would be shorter than hour or an hour and a half. Block scheduling essential. Not every teacher likes that. I know that. I wouldn't be very popular saying that at CSTA...Set up and do experimentation. You can't conduct meaningful group process and discussion.

12. How would you describe the effects of experiential learning on the students you serve?

We've talked about that. It's a more memorable experience. Kids are excited about learning. One thing I didn't say, that I should share. Later in life, what their favorite thing about their elementary school years was; they will with enormous frequency say it was Astrocamp. Their favorite thing! Now, a lot of that could be social, being away from home, spending the night away from family, which is also significant in their lives. If the effect of these sorts of places, if nothing else, why it was their favorite thing they did in all of elementary school. After all we are teaching them valuable skills. That alone should be enough reason to justify doing it.

13. Do these effects occur in stage-like transitions or are they more unpredictable?

Changes take place in stages. In the majority of the groups I taught, kids would cry when they left. You care about them, if you're a good teacher, and they care about you. And even though there is the power structure, and you have an authority stance as the teacher. You're not their friend or peer in that way. It's so wonderful when kids are able to see that there is adult who is an intelligent, well-educated person who likes science, likes what they are doing, who cares about them and is really invested in their happiness.

14. Do you receive feedback from teachers, parents, students, etc.? What kinds?

We have an evaluation form. They rate us on our food, our facilities, and our classroom instruction. It is sort of a 1-10 scale. It has a narrative part. Ninety eight percent of them are positive. There is lots of written and both informal feedback.

15. Does experiential learning work? How do you know?

The teacher evaluations, the informal processes, and an enormous amount of talking to teachers and kids.

16. What tools do you use to evaluate or measure the results of experiential learning?

We talked about that earlier. *How does this program compare to other outdoor education programs?* This is an inexpensive facility as those prices go. Some charge 20% or 30% more easily. It does cost. It is different than some of the county programs, which are paid for. *Some county outdoor education programs are trying to incorporate state standards. How do you feel about that?* One of the criticisms you will hear in this field, pervasively, is that ALL teaching depends upon the teacher. The better the teacher...At the county program, you often end up with older staff who may be in their thirties, forties and fifties who have their credentials that are making \$40,000 a year, which good for them. But the criticism of those programs is that the teaching is often not that inspired. Classes are often large, which I strongly disagree with. The quality of the instruction in county programs is several notches below the quality of instruction you get at private facilities because we have more discretion on who we hire, we have more discretion to fire people if they are not a good teacher, because it's a

private facility. We don't have any government issues with that. At the county level, people often get burned out. If they're making good money doing it, they will keep doing it. That's not good for the kids. We hire them based on the criteria we have. Hopefully, we get good people. We run them through staff program training. Typically, a few of the people we hire have physics and astronomy backgrounds. Not all. We are taking biologists and other sorts of people and teaching them. We are not teaching a high level of physics and astronomy because it is seventh grade. Astrocamp in particular between the content part of their staff education, you need to know that's a Ponderosa Pine..... You know your natural history or you know you physics. There's that which needs to be covered. Then there's the pedagogy – the process of teaching. There's what you know and how you teach what you know. In facilities like this we have to spend a lot of time teaching what they need to know. Often, we don't have as much time as we want to teach people how to teach what they know. So, because we know that we try to hire people who have a lot of talent. Let's face it; so people have a God given talent for music, some people have a talent for teaching. So we try to hire people who are quick on their feet, they're nice people, they are fun, they are excited...We try to teach the theory behind teaching but we get bogged down in teaching people their science. Which is also, let's face it, it's a by product of our graduates most college graduates can't explain to you why we believe the sun is the center of our solar system. That's a cold hard fact. People just can't tell you.

17. From your experience, are there examples of transformative shifts that come to mind? Are there factors that seem to be especially important?

There are lots of factors or growth stages. How do you move kids towards really tight bonds? The examples of transformative shifts are from my own teaching experience. Not uncommonly, once a school arrived and the teacher, that I was going to be working with, as my chaperone, my helper, walked up to me and sort of put her hand on my arm and said, "Brian I want to let you to know that we're going to have this kid named Bart. I tell you he is nothing but trouble. He is going to be out of here if he does anything. I'm sick and tired of this kid. He is disruptive, he's rude, and he's just nothing but trouble." She was a nice teacher. She was burned out, but she wasn't an unkind person. She was giving me her professional evaluation of this student. As you might imagine...Not only was Bart the best kid I had that week. But by the end of trip, he was everyone's favorite kid. He was a superstar. He was the nicest kid around. He was Mr. Helpful. We were all in tears when we said goodbye. It was so heartfelt, our appreciation for each other. That teacher wrote me letters for a year after that. And documented in these letters was how Bart was different in that school. *Why do you think that happened?* Simple. It happened because Bart was rebellious in school for any number of reasons I don't know about: family, the system, four walls, and all that stuff. Bart, like a lot of other people, including myself, when in the setting I had him in, where we could take a walk, we'd be walking for a mile, I gave him opportunities for leadership, meaningful leadership which he loved because it was chance for him to be a different person and he was actually good at these things. The kids in the group started to see that Bart was fun, he wasn't mean to them, he wasn't picking on them, he was playing games, he was helping out.

His name was actually Bart. It sounds ridiculous doesn't it? This was back in the middle of the Bart Simpson days. He introduced himself and said his name was Bart. I said, "No way," "You're kidding." He lived up to his name. It was perfectly symbolic. Do I believe he'll grow up to be a Ph. D and work at Harvard? I don't know. I do believe that every kid has a shift. I think it is safe to say that every kid has a good time. Kids have different relationships with their teachers. Teachers learn from us how to present these ideas in more experiential ways than what they're having to do back in school. There are lots of benefits to teachers that don't tend to get focused on because they're not the kids. *There's something that happened in the relationship. You gave him leadership skills. So, do you think with all the experiential teaching and they are learning?* They don't know that they are learning. If you asked a kid who comes to a good program like this, even Bart, if you asked him. If you sort of said, "Do you love learning Bart?" He might say no. The beauty of learning naturally is that it is not being crammed down their throat and they don't even know that they're learning. The way we all learn. No one taught you how to walk or speak. You do it because that's who you are. It's not intellectual. *How is this different from anyone's experience in life?* Oh well, you have a very skillful facilitator driving a process that does have a desired outcome.

18. If schools were to be more experiential, what kind of training would teachers need?

My personal critique of us is we don't do nearly as good a job of that as we should. Limited application. It's a personal concern as a father. I have a four year old. It's a concern as a citizen of this country.

19. Where would this training most effectively be obtained? *(For example, universities, workshops, etc.?)*

20. Is there anything else you would like me to know?

No.

## REFERENCES

- Anderson, C. W., & Smith, E. L. (1987). Teaching science. In V. Richardson-Koehler (Ed). *Educators' handbook: A research perspective* (pp. 84-111). New York: Longman.
- Anderson, L., Lais, G., McAvoy, L., Schleien, S., & Seligman, D. (1997). Creating positive change through an integrated outdoor adventure program. *Therapeutic Recreation Journal*, 31(4), 214-229.
- Argyris, C., & Schon, D. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.
- Beard, C., & Wilson, J. P. (2002). *The power of experiential learning*. Sterling, VA: Stylus Publishing Inc.
- Berman, D. S., & Davis-Berman, J. (2000). *Therapeutic uses for outdoor education*. Retrieved December 8, 2003 from Clearinghouse on Teacher Learning. (ERIC Document Reproduction Service No. ED 448011). [http://www.ericfacility.net/databases/ERIC\\_Digests/ed448011.html](http://www.ericfacility.net/databases/ERIC_Digests/ed448011.html)
- Bredderman, T. (1983). Effects of activity-based elementary science on student outcomes: A quantitative synthesis. *Reviews of Educational Research*, 53, 499-518.
- Caine, R. N., & Caine G. (1994). *Making connections: Teaching and the human brain* (Rev. ed.). Menlo Park CA: Addison-Wesley.
- Cronin-Jones, L. (1992). *The schoolyard wildlife activity guide*. Tallahassee, FL: Florida Game and Fresh Water Commission.
- Cronin-Jones, L. (2000) The effectiveness of schoolyards as sites for elementary science instruction. *School Science & Mathematics*, 100(4) 203-209.
- Crowell, S., Caine, R. N., & Caine, G. (1998). *The re-enchantment of learning a manual for teacher renewal and classroom transformation*. Tucson, AZ: Zephyr Press.

- Dewey, J. (1916). *Democracy and education*. New York: Macmillan.
- Dewey, J. (1938). *Experience and education*. New York: Collier Books.
- Dunning, S., Lueders, E., & Smith, H. (1967) *Reflections on a Gift of Watermelon Pickle. . . and other modern verse*. New York:Lothrop, Lee & Shepard Books.
- Friese, G., Hendee, J., & Kinziger, M. (1998). The wilderness experience program industry in the United States: Characteristics and dynamics. *The Journal of Experiential Education*, 21(1), 40-45.
- Gablik, S. (1991). *The reeinchantment of art*. New York: Thames & Hudson, Inc.
- Gardner, H. (1983). *Frames of mind*. New York: Basic Books Inc.
- Gibbons, M., & Hopkins, D. (1980). How experiential is your experience - based program? *The Journal of Experiential Education*, 3(1), 32-37.
- Glass, J.S., & Bensoff, J.M. (2002). Facilitatng group cohension among adolescents throug challenge course experiences. *The Journal of Experiential Education*, 25(2), 268-277.
- Glass, R., Nemeth, P. (2003). You gotta have art! *American Teacher*, 87(6), 10-11, 18.
- Goldberg, M. (1997). *Arts and learning*. New York: Longman.
- Green, M. (2001). *Variations on a blue guitar*. New York: Teachers College Press.
- Hahn, K. (1960). *Outward bound*. Address at the Annual Meeting of the Outward Bound Trust, July 20<sup>th</sup> 1960.
- Hattie, J., Marsh, H., Neill, J., & Richards, G. (1997). Adventure education and outward bound: Out - of - class experiences that make a lasting difference. *Review of Educational Research*, 67(1), 43-87.

- Henson, K. T. (2003). Foundations for a Learner - Centered Education: A Knowledge Base. *Education*, 124(1), (5-16).
- Hutchens, James, W. & Suggs, Marianne Stevens, edited by. (1997) *Art Education: Content and Practice in Postmodern Era*.
- Hutchings, P., & Wutzdorff, A. (Ed.). (1988). Knowing and doing: Learning through experience. *New Direction for Teaching and Learning* No. 35. San Francisco: Jossey-Bass.
- Jadallah, E. (2000). Constructivist learning experiences for social studies education. *The Social Studies*, 91(5), 221-225.
- James, T. (1990). Kurt Hahn and the aims of education. *Journal of Experiential Education*, 13(1), 6-13.
- Kelly, J. (2000). Rethinking the elementary science methods course: A case for content, pedagogy, and informal science education. *International Journal of Science Education*, 22(1), 755-777.
- Kolb, D. A. (1984). *Experiential Learning*, Prentice Hall, Englewood Cliffs, NJ (p38).
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall.
- Kolb, D. A. (2003). David A. Kolb on experiential learning. Retrieved December 1, 2003 from Infed.org. <http://www.infed.org/biblio/b-explrn.htm>
- Kolb, D. A., & Fry, R. (1975). Toward an applied theory of experiential learning. In C. Cooper (Ed.). *Theories of group process* (pp. 33-56). London: John Wiley.
- Lais, G. (2001). Accessible adventure: Leadership techniques that facilitate full participation by all. *Taproot*, 13(1), 3-10.
- Lewitzky, B. (1989). *Why art?* University of California, San Diego Regent's Lecture, May 31, 1989.



- McAvoy, L., & Lais, G. (2003). Wilderness, hope and renewal - programs that include persons with disabilities. *The Journal of Physical Education, Recreation & Dance*, 74(7), 25-32.
- McAvoy, L., Schatz, E., Stutz, M., Schleien, S., & Lais, G. (1989). Integrated wilderness adventure: Effects on personal and lifestyle traits of persons with and without disabilities. *Therapeutic Recreation Journal*, 23(3), 51-64.
- McKenzie, M. (2003). Beyond "the outward bound process:" rethinking student learning. *The Journal of Experiential Education*, 26(1), 8-23.
- Meier, J. F. (2003). Wilderness education. *The Journal of Physical Education, Recreation and Dance*, 74(6), 23-24.
- National Institute of Adult Continuing Learning Education. (2003). Reclaiming and re-embodying experiential learning through complexity science. Retrived on July 7, 2004 from <http://www.niace.org.uk/>
- Neill, J. (2003a). *Outdoor education philosophy*. Retrieved December 1, 2003. <http://www.wilderdom.com/philosophy.html>
- Neill, J. (Ed.). (2003b). *Scale of experientiality*. Retrieved May 18, 2004 from <http://www.wilderdom.com/theory/ScaleofExperientiality.html>
- Norris, E., Reichard, C., & Kouider, M. (1997). The influence of drawing on third graders' writing performance. *Reading Horizons*, 38(1) 13-30.
- Piaget, J. (1926). *The language and thought of the child*. New York: Harcourt, Brace & World.
- Powell, K., & Wells, M. (2002). The effectiveness of three experiential teaching approaches on student science learning in fifth grade public school classrooms. *Journal of Environmental Education*, 33(2) 33-38.

- Reynolds, A. J. (1991). Effects of an experiment-based physical science program on cognitive outcomes. *Journal of Educational Research*, 84(5), 296-302.
- Ring, L. (2000). The T in art is for thinking. *Gifted Child Today*, 23(1), 36-45.
- Sibthorp, J., Paisley, K., & Hill, E., (2003). International programming in wilderness education, revisiting its roots. *The Journal of Physical Education, Recreation & Dance*, 74(8), 21-24.
- Stevens, P. W., & Richards, A. (1992). *Changing schools through experiential education*. Charleston, WV: Eric Clearinghouse on Teacher Learning. (ERIC Document Reproduction Service No. ED 345929).
- Tarrant, M. A., & Green, G. T. (1999). Outdoor recreation and the predictive validity of environmental attitudes. *Leisure Sciences*, 21, 17-30.
- Teets, S. T., & Starnes, B. A. (1997). Foxfire: Constructivism for teachers and learners. *Action in Teacher Education*, 18(2), 31-39.
- Van Tassel-Baska, J. (1998). *Excellence in educating gifted and talented learners*. Denver, CO: Love Publishing.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Walsh, V., & Golins, G. (1976). *The exploration of the Outward Bound process*. Denver: Colorado Outward Bound School.
- Weil, S. W., & McGill, I., (Eds.). (1989). *Making Sense of Experiential Learning*. Philadelphia, PA: SRHE and Open University Press.